Aalto University
School of Business

ASSESSMENT OF TRADE FAIR PERFORMANCE

An application of fuzzy-set/ qualitative comparative analysis

Master's Thesis
Ha Trinh
Aalto University School of Business
Marketing Program
Fall 2019

Aalto University
School of Business

Aalto University, P.O. BOX 11000, 00076 AALTO
www.aalto.fi

Abstract of master's thesis

Author Ha Trinh

Title of thesis Assessment of Trade Fair Performance – An application of fuzzy-set/ qualitative comparative analysis

Degree Master of Science in Economics and Business Administration

Degree programme Marketing

Thesis advisor(s) Elina Koivisto, Tomas Falk

Year of approval 2019 **Number of pages** 80 **Language** English

Abstract

This thesis is an extension in the literature stream of trade fair performance assessment in which the relationship between marketing efforts and performance outcomes is studied. The study starts with literature review on trade fair's performance measurement and then it presents the conceptual framework grounded in Resource-Based View. This is an application of an alternative research methodology, Fuzzy-Set/ Qualitative Comparative Analysis to study performance assessment of Business-to-Consumer trade fairs. An extensive online questionnaire was sent to trade fair exhibitors' contacts provided by Finnish Trade-fair Association (Messukeskus), to collect the data of trade fair's marketing inputs and outcome measures. During the data processing phase, outcome and conditions were justified and calibrated then analyzed in R studio. As results, the thesis delivers two causality model solutions of High-performance outcome and Low-performance outcome at trade fairs. The discussion deliberates the insights from the solutions to document best practices in coordinating trade fair's resources. In addition, the study emphasizes the importance of objective settings to achieve expected performance and promotes the application of FS/QCA in marketing performance studies.

Keywords trade fair, trade fair performance, fuzzy set, qualitative comparative analysis

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

The purpose of this chapter is to provide the audience a summary of topic's background, main objectives of the research and its contribution to the research stream of trade-fair marketing. For several years, companies have known that trade-fair exhibition is a powerful marketing instrument to promote company's offerings to potential customers visiting the fair (Kerin & Cron, 1987). According to recently published data from UFI (The Global Association of the Exhibition Industry) on global economic impact of exhibitions, in 2018, global exhibitions generate total direct spending, including all direct spending by exhibitors and visitors, of about €116 billion and total direct GDP of €69 billion, making exhibitions 72th largest sector in the world. In terms of participants, the activity involve about 4.5 million exhibitors and 303 million visitors across more than 180 countries (The Global Association of the Exhibition Industry, 2019). The statistics in 2018 from the same report also indicates that North American ranks first in direct spending (44% of global market) and number of exhibitors (35% of global market) while Europe ranks first for number of visitors (37% of global market). Perhaps, among the business sectors who attend trade fairs as exhibitors, the activity has become the most popular and also most important for industrial companies those who has the tendency to rely more heavily on personal selling than other forms of promotion. In fact, trade fair is only behind personal selling in its impact on buying decisions in industrial context (O'Hara, 1993). In addition, recent data shows that industrial firms could allocate up to 20% of their total marketing budget for trade-fairs, making fair exhibition the most important element in their marketing plan followed by digital advertising and content marketing (Tafesse & Skallerud, 2017). Due to this reason, literatures in past years have mostly studied industrial firms in the context, leaving a shortage on B2C tradeshow studies. In fact, in 91 tradeshow articles from 1980 to 2014 which were reviewed by Tafesse & Skallerud (2017), 30% were published by Industrial Marketing Management and Journal of Business & Industrial Marketing. Previous researches also highlight fair marketing as a tool for personal selling because it sets up the shared environment for sellers and buyers meet and discuss what seller have to offer and what buyers are willing to buy. Furthermore, trade-fair is believed to be efficient for lead management since it allows company to approach qualified sales leads with clear interests in the category that companies operate within. However, the result from fair exhibition still greatly depends on how exhibitors leverage their resources

to optimize the performance of tradeshow and to generate qualified leads to follow-up afterwards (Rosson & Fairs, 2001).

With the changing environment of technology and fierce competition landscape, companies are now required to focus on and justify marketing ROI (Return-on-Investment) in their actions to optimize their investment for achievable and measurable returns. This shift in marketing makes it substantially dissimilar from the situation in the past when marketing is mainly about companies betting on their creative ideas, coming up with their "best-guess" campaigns and they only could evaluate the effectiveness of the past campaigns based on ambiguous relationship between investment and business results. At the same time, marketing witnesses the change in the importance weight of digital marketing due to not only the penetration of internet and social media but also because both investment and return could be quantified and recorded to help companies plan, learn and improve their investments. On the other hand, there remains a big part of marketing activities that is not that straight forward to be quantified and analyzed such as brand building activities but managers are still requested to justify the investments. This research on trade fair performance does not aim to quantify the investment and return on the activities as for many companies, this activity has shifted focus to long-term objectives such as image building rather than pure business transactional driven. However, this thesis is an effort to use quantitative method to identify the best practice in terms of resource allocation to deliver good performance outcome from their exhibition.

The research is an extension in the stream of trade fair performance assessment where the relationship between marketing efforts and performance outcome are studied with the use of quantitative methodology (Gopalakrishna & Williams, 1992; Hansen, 2004; Ling-yee, 2007; Seringhaus & Rosson, 1999). First contribution of this thesis to the literature stream on trade fair performance is its application of an alternative research methodology, Fuzzy Set / Qualitative Comparative Analysis, to study trade fair marketing best practice. This method is not unknown in social studies but has not yet been applied in studying trade fair marketing performance and it offers the allowance of combining qualitative case study with quantitative method. As a result, the study creates an applicable model of trade-fair marketing performance from the resource-based perspective and marketing engineering approach to help businesses achieve positive performance outcome for their trade-fair marketing investment. In addition, this thesis marks an attempt to take closer look in B2C

(business-to-consumers) trade fairs, which receives questions regarding their effectiveness as a marketing activity compared to others favorable touch-point to reach consumers such as digital marketing, traditional media and retail.

The thesis starts with Literature review section, which discusses trade-fair marketing and related marketing themes that altogether shape the direction for the research. Since this is an exploratory research, no hypotheses are presented or to be confirmed; in contrasts, the author explores the previous works in searching for possible marketing inputs, as known as conditions in FS/QCA method to develop the questionnaires. Also, as FS/QCA still lacks popularity compared to conventional quantitative method in marketing research, the following methodology section provides an overview of the method in details, in comparison with the more popular quantitative methods. Later, the data collection chapter documents the research process to finalize in the model results for Good Performance outcome as well as for its Negation. The discussion chapter is a summary of best practice that is suggested by finding results, followed by managerial implication and limitation of the study.

2. RESEARCH BACKGROUND

2.1. Tradeshow Exhibition as a Marketing Phenomenon

Trade fair, also known as trade show, exposition or convention, is a type of marketing event where a group of businesses including manufacturers, distributors, service providers, in one location and during a short time period, gather to set up physical exhibitions to present their company and offerings to public (Herbig, O'Hara, & Palumbo, 1997). Since this type of marketing event is originally formed to serve the purpose of creating a market place and stimulating business transactions (Tafesse & Skallerud, 2017), trade fair in academic studies has been often reviewed through personal-selling framework. According to Gopalakrishna and Lilien (1995), trade fair is conceptualized into three stages based on the flow of visitor traffic to reflect the industrial multi-stage selling process: Booth Attraction, Salesperson Interaction and Lead Generation. Each step is consisted of certain activities serving separate purposes but, at the same time, they are combined together to optimize outcome performance. According to this model, the intention of pre-show activities is catching visitor attention, driving visiting traffic to the fair and to the company's specific booth. Next, At-show activities develop visitors' interest in the exhibitor and their offerings via numerous communications and interactions between the company and potential customers. At last, the loop is completed with Post-show activities to advance customer interests into purchasing intention. Although it offers a generic picture of trade fair that applies to several exhibitors, this model only captures the process of generating qualified leads as final outcome and neglect other dimensions of tradeshow performance (Tafesse & Skallerud, 2017). However, there have been studies trying to generalize Tradeshow Performance as a construction from different marketing areas; as an example, Hansen (2004) used structural equation modeling to explain Tradeshow performance as a construct of sales-related activities, information gathering activities, relationship-building activities, image building activities and employee motivation activities. This framework is also cited by other literatures to explore the importance of tradeshow in aspects other than sales generation such as information gatherings at and post-show or data analysis after show (Bettis-Outland et al., 2010; Ling-Yee, 2007).

Generally, Trade fair's benefits for exhibiting participants include sales promotion, relationship building, company image enhancement and knowledge exchange (Blythe,

2002; Ling-Yee, 2006). To exhibitors, the benefits, or objectives can certainly be broken down into sub-categories as the guidance for deploying marketing resources effectively and efficiently to achieve the expected returns. Previous literatures investigate several categories of trade fair's benefits for exhibitors in order to answer the question that companies are all interested in: "Why exhibit?"; but again the academy is still searching for an comprehensive answer instead of fragmented themes (Tafesse & Skallerud, 2017). To arrive at the answer, many researchers reshape the questions into "What objectives" and the measurement of objective achievement answers if investments on exhibition are worth it.

2.1.1. Tradeshow Objectives

Before making the decision to implement any marketing activities, including the participation as exhibitors in any trade fairs, companies need to clearly define the objectives they aim to achieve as the outcome of the activities. Setting good objectives in business class is equivalent to using S.M.A.R.T method, which stands for Specific, Measurable, Attainable, Realistic objectives within defined Timeline. However, in practice, several companies fail to set the objectives that match those criteria or neglect in measuring the objectives after the show (Blythe, 2000; Gopalakrishna & Lilien, 1995). Similar to company strategic objectives, tradeshow objectives differ among companies due to various factors such as the brand visibility on the market, the nature of marketplace or the penetration level of product category (Gopalakrishna & Lilien, 1995). This is also mentioned by Cavanaugh (1976) that companies need to consider several areas when setting the objectives for tradeshow: the purpose for exhibition, the target prospects, the show typologies, target effectiveness, marketplace competition and project budget.

As previous literature attempts to categorize trade fair's objectives, it is suggested that objectives differ among typologies of trade fairs. The fairs can be classified by participants' industrial profiles such as vertical and horizontal shows, or by visitor profiles, B2B or B2C shows (Tafesse & Skallerud, 2017). In vertical trade fairs, where the product range is relatively narrow and specific so as visitor profiles, it might be more relevant for attending companies to set sales-related objectives since the lead efficiency is expected to be higher than in horizontal shows where visitors have diversified interests. While any marketers would need to tailor the marketing efforts and allocation of resources to target

different customer groups and to achieve dissimilar objectives, trade-fair managers would face the same challenges to allocate marketing resources differently when the company attend different fair typologies. In addition, trade fair objectives of specific exhibitor vary according to the company's directional strategy and their focus at certain timings. For instance, when a company has recently launched a new product or service, most of marketing campaigns and trade fair's efforts are likely to centralize to promoting new products. In the other phases of main product's life cycle, exhibitors could possibly attend the fair to maintain visibility and competitiveness against competitors. Overall, setting well-defined objectives is fundamental for companies' performance at trade fairs since the objectives are the starting point and the driver of how companies invest their efforts, implement activities and measure the performance of the exhibition. The following section provides a review of popular trade fair activities that are witnessed in exhibitions and the activities are group in the themes which are strongly driven by the objectives.

Several studies have attempted to construct the framework for trade-fairs; among them, Hansen (2004) introduces moderately comprehensive picture of trade fair based on five key aspects of the marketing event: sales-related activity, image-building activity, relationship-building activity and motivation-building activity. This model links closely to the objectives of trade fair and also represents how the objectives could be categorized; therefore, it seems to be more comprehensive than the renowned three-stage model (O'Hara, 1993) which is mostly relevant for personal-selling-focused fairs. While three-stage model divides the event horizontally by its timeline and reviews the activities in each phase: pre-show, at-show and after-show following the pipeline of lead conversion funnel, Hansen's (2004) model ignored the timeline and divided the show based on its marketing objectives that could be seen throughout the process. To review the main objectives and also main activities of trade fairs, this thesis uses Hansen's (2004) model but leaves out employee motivation and customer relationship building from its scope, as B2C trade-fairs in the context place less emphasis on these two objectives in their fair participation.

Sales-related objectives

One type of exhibitors' main activities in trade-fairs, sales-related activities involve selling during and after the fair. Therefore, besides sales transactions happening at the fair, this dimension also includes activities that are related to the sales process such as lead generation, new product and demand evaluation. Previous literatures often measure sales-

related outcomes using "hard measures", or numerical measures, such as number of leads, exhibit attraction efficiency (Gopalakrishna & Williams, 1992), number of contacts, number of sales transactions, time to secure sales, cost per lead (Seringhaus & Rosson, 2004). The usage of hard measures is supported also in practice where managements often use quantified index to keep track of their sales teams' performance. On the other hand, the application of "soft measures" enables researchers to evaluate the outcome from the perspective that cannot be precisely quantified for example educating customers or testing customer reaction to new products. Overall, the sales-related objectives could be grouped into four categories: new customer prospecting, realizing business transaction, product or service promotion and customer retaining. As the names explain, these objectives are all sources of growth that sales and profit-driven companies would aim at, either inside or outside of the scope of trade fair marketing. Even though trade fair has been evolved from the early stage and it is not mainly about personal selling and business transaction driven, the phenomenon is undeniably the medium with high lead conversion rate as the visitors attending the shows have certain level of interests in exhibitors' offerings. When companies are targeting the customers at this interest-level of purchasing funnel, sales-related objectives are highly relevant and should be considered as the driver for exhibition activities.

Brand-building objectives

Certainly, enhancing or defending company image is one of the key objectives for participating in tradeshow exhibition. Key motives for this activity include competitive pressure, customer expectation and image establishment (Hansen, 1999). Many companies have reported to attend tradeshows because the key competitors in the industry participate and visibility absence from such show might lead to losing brand image competitiveness and disappointing customer expectation, especially in the case of bigger companies. However, for smaller companies, tradeshow is effective in promoting brand images and companies who set image promotion as an objective have better tradeshow performance than companies with only sales and leads generation objectives (Tanner, 2002). To succeed in building company image at tradeshow, besides sustaining a competitive display with competitors that reflects the brand image and positioning (Gilliam, 2015), exhibitors need to focus on market communication in general and leverage press publicity (Hansen, 2004).

Building a brand image cannot be accomplished by any single marketing activity; instead, it requires a long-term coordination of several, integrated marketing communication efforts, in which tradeshow participation is one of the blocks. This is aligned with integrated marketing communication (IMC) literatures that image building is always a critical objective for IMC strategy. Any communications within IMC deployment should aim at simultaneously developing or establishing an image (Phelps & Johnson, 1996). Without the memorable image, companies are unable to be remembered by the customers, thus it makes the image one of the most important metrics for marketing performance.

Information Gathering Objectives

Information Intelligence is the topic that receives tremendous attention in recent years regarding how companies gather and get use of collected information to support decision making. As a channel to get interaction with several contacts in the industries, tradeshow provides various ways an exhibitor can gather information about new products, industry trends, competitors, and customers (Hansen, 2004). Tradeshow is a place where professional and experts in the industry gather, thus companies can learn a lot from industry's opinion leaders and through peer discussions between employees. Furthermore, when we look at all visitor traffic as a mini simulation of the marketplace, it is one of the most effective ways to talk to customers, discover what they think and react to a new product offering. In order to conceptualize the return on tradeshow information, Betis-Outland (2010) categorized tradeshow information by the timing the information is acquired and the dissemination of information to be used in the organization. This study suggests that there is a direct relationship between the use of information by members of organization and the return on tradeshow information, and that the usage of information depends the significance of information's perceived quality.

In a study of relationship between integrated marketing communication, market orientation and brand orientation, Reid et al. (2005) proposed the inter-functional coordination which creates the link between IMC and Market orientation. The term provides a description of the information dissemination among internal functions in order to prepare business strategies as well as to coordinate and integrate activities across departments. In the other words, information gathering is a shared activity between cross functions, and information collected during tradeshow should be and need to be shared and used in coordination with information gathered from other sources. As information gathering and analysis at trade

fair and in general of marketing function is substantially important pillar of marketing process, especially at this time era of data-driven business, companies should have a clearly defined framework to collect and make use of data to transform information into organizational knowledge (Reid, Luxton, & Mavondo, 2005).

2.1.2. Tradeshow performance measuring

Even without a clear answer regarding return on investment of tradeshow, many marketing managers are willing to invest a portion of their limited budget in tradeshow exhibition, making tradeshow performance an attractive topic for marketing scholars who seek to measure and optimize exhibition's performance. Several efforts are dedicated to this topic; of all 91 tradeshow literatures during the period 1980 – 2014 reviewed by Tafesse (2017), there are 40 studies concentrating on tradeshow performance. The review also observes that Resource-Based View (RBV) has become increasingly popular in recent years for tradeshow performance studies; between 2005 and 2014, there are four studies using RBV as conceptual framework, bringing RBV to the top three theories most influencing tradeshow studies.

Measuring tradeshow performance is the topic that has received tremendous attention of researchers over the years due to its pragmatism in business. Even though there have been many works in this study stream, researchers still cannot arrive at a synthesized conclusion measuring tradeshow effectiveness (Tafesse & Kitchen, 2017). To summarize researches in measuring tradeshow outcome, previous literatures can be divided in two tracks of measuring sales-related outcomes and behavioral-related outcomes (Hansen, 2004). Traditionally in the past, when direct selling was one of the main objectives for many tradeshow exhibitions, selling outcomes received huge interests from researchers. Selling outcomes are measured via metrics such as booth attraction efficiency, booth conversion rate, lead efficiency and actual sales (Tafesse & Korneliussen, 2013). However, in the recent years, the focus has been shifted to behavioral-related outcome, as to marketing managers, tradeshow is more of a long-term investment rather than yielding immediate returns. Hansen (2004) suggested that sales-related outcome is not an appropriate measure for the tradeshow exhibitors who takes non-selling activities more important than selling activities.

Another way to summarize trade fair's performance studies is distinguishing studies using soft measures vs. hard measures. While hard measures are objective, it cannot capture a number of outcomes that cannot be quantified, many researchers decided to adopt both measures. Seeking the most generalization method to measure the tradeshow, we see that there are not many studies that evaluate the performance fully. Instead, several studies focus on the sales-related measures while others might only address the measures for a specific perspective such as relationship-building (Ling-yee, 2006). However, as tradeshow performance is multidimensional, the model proposed by Hansen (2004) appears to be the fullest solution to measure this variable.

Hansen's (2004) study adopted marketing control system theory to develop construct of tradeshow performance that reflects both outcome-based and behavior-based control system taxonomy. Using soft measures, Hansen (2004) proposed a Trade Show (TS) Performance model of five dimensions: Sales-related, information-gathering, image-building, relationship-building and motivation activities. Selected five dimensions have been supported theoretically in other tradeshow literatures and model construction reliability is tested through empirical research.

2.2. Resource-Based View Theory

Simply defined, firm's resources are what the firms possess and rely on to achieve the objectives of the business. The RBV Theory (Resource-Based View) is grounded from the business approach that firms utilize the Resources under their controls including all assets, capabilities, processes, knowledge, information, etc. to develop and implement business to improve business performances (Barney, 1991). Even though some RBV literatures refer to Resources as Assets and thus provide the understandings of resources as exclusive from capabilities, this study uses the general term "Resources" to cover all the possessions listed in the above definition, including capabilities. According to several researchers, Resource-Based Theory has received attentions and applications in different aspects of business management literatures such as finance, supply chain management, marketing. Even though Resource-Based Theory has reached maturity as a theory, its framework is still applicable in many contemporary researches (Barney, Ketchen, & Wright, 2011).

A number of previous performance studies are centered by RBV theory, guiding the businesses to take full control of their resources by having a thorough understanding of internal strengths and weaknesses as well as analyzing market's intelligence to develop the strategy for the achievement of performance objectives (Morgan, Clark, & Gooner, 2002). However, another question besides achieving the objectives is how the firm can sustain the competitiveness and even get ahead of competitors when the same resources could be acquired by other players in the market. To answer this question, RBV suggests the importance of resources in creating and sustaining Competitive Advantages (Barney et al., 2011). The theory proposes that some resources are more important in generating competitive advantages for the firm than others, depending on their potentials to facilitate superior value offering to customers, whether they could be imitated by competitors (Hooley et al., 2005). If we take a look at each type of resources, we see that while Assets, or physical asset can be traded, transferred and financially quantified, thus could be imitated by competitors; capabilities, on the other hand, are intangible and difficult to be imitated (Day, 1994), hence they are more sustainable resources for the firm. The below quoted a good declaration of what capability means for businesses.

"Assets are the resource endowments the business has accumulated (e.g., investments in the scale, scope, and efficiency of facilities and systems, brand equity, and the consequences of the location of activities for factor costs and government support); and capabilities are the glue that brings these assets together and enables them to be deployed advantageously" (Day, 1994, p.38)

Simply explained, capability tells how a company, at different levels, coordinate different resources, including assets, information, and knowledge to gain the advantages over competitors and achieve performance objectives. Firm's capabilities are developed through employee's experience in integrating their skills and knowledge to convert input into outputs or resources to outcomes. As they are constructed by several factors of time, humans and contexts, capabilities are unique and is difficult to transfer or imitate (Vorhies, 1998). The linear process of marketing performance stages below by Morgan, Clark and Gooner (2002) described the coordinating role of Capabilities for performance achievement. Also, in this model, different levels of capabilities are listed, in ascending order of generalization, such as individual employee's capability, single-tasks related capability achieved through routine, specialized capabilities in certain areas, function's or

department's capabilities and finally the capability shared throughout the organizations. It is observable that in this era that we are living in, where the capitals, knowledge and skills are fixed, transferable or obtainable, Capabilities are among of the best sources for competitive advantages due to its complexity and the involvement of human factors.

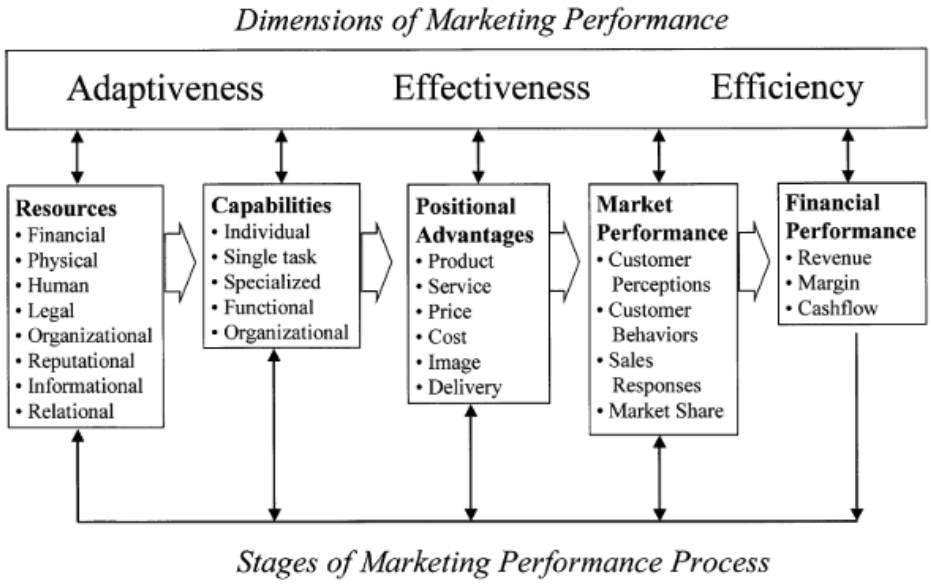

Figure 1. Stages of Marketing Performance Process

(Morgan et al., 2002, p.367)

Marketing capabilities as firm's strategic resource

Hooley et al. (2005) used the term "Marketing Resources" to capture the resources that create value in the market place in which the firms offer their products or services. Similar to the definition of firm resources, marketing resources can be assets, processes, capabilities, attributes, knowledge and information that enables the generation of competitive advantage in the market. Aligned with this definition, Ngo and O'Cass (2012) used marketing resources referring to the resource that a firm owns related to marketing mix activities: product, distribution, promotion, and price. On the other hand, Marketing Capability is understood as the ability to execute marketing activities, as the companies' medium to convert marketing resources into expected marketing outcomes (Ngo & O'Cass, 2012). This definition of Marketing Capability is similar to the Marketing Response model in the definition of marketing engineering approach (Lilien & Rangaswamy, 1998). The Marketing Engineering approach highlights the importance of

the mean to convert marketing inputs to marketing outcomes; and this mean is a model simulating how inputs are combined and interact with each other to produce the outcome. Explaining the approach backward, if we want to understand how to achieve an outcome, we need to understand how marketing response model work, to select and coordinate the needed inputs for that.

If Capability should be viewed in different level of the firms, and Marketing Capability is seen as specialized capability, then a firm's Marketing Capability could be broken down into different types of capability such as Pricing, Product Management, Distribution Management, Marketing Communication, Selling, corresponding to the pillars of Marketing Mix. On the other hand, if we view marketing capability at the task-level, there are two generalizations of tasks that are credential in bringing all specialized tasks together, coordinating them effectively and efficiently: Planning and Implementation. Marketing Planning and Marketing Implementation capabilities are said to be the more valuable and imperfectly imitable capabilities as they are knowledge-based and process-based growing and changing together with "know-how" expansion (Morgan, Vorhies, & Mason, 2009).

Furthermore, while marketing planning and marketing implementation are two crucial tasks for marketers, the two themselves cannot complete a circle of marketing process. Indeed, after planning and implementation, marketers always need to measure the performance of certain activities, to evaluate if everything was done right, effectively and efficiently as the plan. Because it is a circle, the capability to measure marketing performance definitely affect the capability of planning and thus of marketing implementation. Apparently, companies have their own ideas of which capabilities are their key concentration that enables their competitive advantages vs. competitors. At the same time, it is a challenge for companies to coordinate and arrange their firm's resources and capabilities to optimize sub-level resources and capabilities needed for different levels of the business, such as different functions, different campaigns, and different product lines. (Morgan et al., 2002)

Marketing Planning Capability

By definition, Marketing Planning capability enables the firms to coordinate resources and capabilities to deliver optimize business objectives (Morgan, Zou, Vohries, & Katsikeas, 2003). And marketing planning capability is directly driven by the firm's knowledge base of internal experiential knowledge and external informational knowledge. Any firm would aim to acquire both experiential knowledge of individual employees and the firm's accumulated experiences; and these are used altogether in the marketing planning process to design the blueprint for activities. Depending on organizational arrangement, some companies have central Marketing Planning team who works on the high-level strategic planning to connect the marketing specialists in different areas together and to the other functions of the company. However, marketing planning is also embedded in any marketing functions as the day-to-day job for marketers before they implement the activities to make sure the activities supports business objectives and are executed efficiently in comparison with the past experiences, existed resource and competitive landscape. Planning and execution are not separate steps on a linear process but instead it's a cycle of marketing where the output of planning is input for implementation and vice versa. The output of implementation transforms into the firm's knowledge bank as a part of planning capability to continuously revise and improve firm's strategies and implementations.

Marketing Execution Capability

Marketing Implementation capability concerns the ability of the firm to perform marketing routines to translate marketing strategies into actions (Morgan et al., 2003). In addition, it should be noted that marketing capability directly has impacts on campaign effectiveness (Ngo & O'Cass, 2012). Even though in this 2012 study, the authors only looked into media campaign, it's expected that the implication is valid for other types of marketing campaigns.

Marketing resources can be categorized into Market-based resources and Marketing Support Resources. Market-based resources is used immediately to generate or maintain competitive advantage in the market (Hooley et al., 2005); its typologies often discussed in marketing literatures are Customer-liking capability, Market Innovative capability, Human resources asset, Reputational asset. On the other hand, Marketing support resources support the acquisition and deployment of market-based resources. It is consisted of the

firm's marketing culture and capability of management to deliver marketing operation excellence (Hooley, Greenley, Cadogan, & Fahy, 2005)

Hooley et al. (2005) also proposed the relationship between managerial capability and the competitiveness level of a firm's Market-based Asset. A firm with highly capable management certainly has advantage in the development of not only human resource asset, company reputation but also customer-liking capability and firm innovativeness. While market-based resources are most relevant at the firm's strategic level, at the campaign level, it is also likely to be channeled direct resources and supporting resources. Similar to market-based resource, campaign level direct resources are used to directly generate an edge over competitors. Supporting resource are the underlining and supporting force to enable enhance the acquisition or deployment of direct resource (Hooley et al., 2005).

Grounded in Resource based view, in recent years, many researchers have been interested in marketing-related capabilities as an integrative process to convert marketing resources input to market-related outcomes (Day 1994). For instance, the study of Ngo and O'Cass (2012) supported that marketing capabilities create the positive impact on the firm performances. It has also been discussed in other literatures that the capability to deploy firm resource to maintain market competitiveness explain the variance in firm's performance over time (Ngo & O'Cass, 2012).

Integration of Marketing Planning and Implementation

As marketing planning and marketing implementation are both part of marketing cycle, this cycle requires the integration of these two phases as well as the integration among the smaller constructs within each phase. Integration ensures the synchronization of individual activities, smoothly transform the output of one activity into resources for other activity and hence to optimize the operational results of marketing function. In a broad concept, it is referred to as Integrated Marketing Communication (IMC), the marketing restructures that key marketing or marketing communication disciplines merge together, requiring synchronization of individual activities (Schultz, Don E. ; Tannenbaum, Stanley I. ; Lauterborn, 1993).

Despite the difficulties to quantify the impact of IMC on firm's performance outcome, marketing literatures have supported the positive relationship between the two variables. Reid et al.'s (2005) study showed that IMC performance is directly and positively related to market performance of the firms in terms of Brand advantage, Customer Satisfaction and Sales Performance. It also suggested that Integrated Marketing could be categorized into Strategic and Tactical processes: strategic dimension focusing on long term objectives and tactical level referring to the campaign level communication to achieve short-termed goals. This framework also responses to the two marketing functions that are discussed: Marketing Planning outlining strategy direction and Marketing Implementation aiming for specific short-termed objectives.

A firm's capability to perform marketing planning and implementation activities as well as the capability to integrate and synchronizes those individual activities within the big picture is key driver for outstanding performance outcome. Luxton et al. (2015) mentioned that marketing manager needed to be able to evaluate their integrated marketing capability and ensure the company's IMC competitiveness in the market since this capability had positive impact on the campaign effectiveness, market performance of the brand and indirect influence on the financial performance. This evaluation should take into consideration of performance in each individual activity and the performance of information synchronization within the parts.

Tradeshow Resources and Capabilities

Marketing execution is enabled by different types of resources including firm's strategic resources and campaign resources. Business performance at trade fairs are also affected by strategic resource level as Ling-Yee et al. (2007) suggested the firm's strategic resources such as customer-liking capability, partnering capability, managerial capability impacted tradeshow performance through the stages of the fair. Positively affecting both pre-show promotion and at-show selling process, Customer-liking capability refers to the firm's capability to understand customers' needs and wants as well as to develop customer relationship (Hooley et al., 2005). Partnering capability, on the other hand, refers to the firm being able to develop and maintain good relationship with strategic partners and industrial networks (Srivastava et al., 1998), thus more likely to involve preshow promotion. At last, managerial capability enables cross-functions to coordinate effectively, hence enables post-show follow-up which often requires coordinated efforts from different

departments. Extending this direction to study firm's strategic resources, there is an open question regarding the impact of firm's IMC capability on tradeshow performance.
At campaign level, the resources enabling tradeshow execution are also contributed by different functions. Ling-Yee et al. (2007) adopted three-stage model and defined the major resources allocated for three stages of tradeshow process. To a firm, booth-attraction stage requires the employment of several attention-getting techniques, pre-show promotions together and in addition good location and size of booth display. While tradeshow manager's responsibility is to acquire the resources for remarkable booth display, preshow promotion could be substantially enabled by marketing communication capability. At the first stage, firms often use Direct mail, print ad and email to support preshow promotion and this usage correlate positively with performance of tradeshow. At the second stage, the most important resource is booth staff capability to create a good interaction with customers and to identify and generate leads for further process. The aided communication tools to support personal selling in this stage are often brochure, interactive presentation or a product demonstration kit (Tafesse, 2013). Lastly, the last stage requires firms to follow-up with the customers; this makes great use of the firm's capability to analyze the data gathered after the show for diverse business purposes such as demand studies, lead management or competitor information. The tools that are often used in this stage, according to Tafesse (2013), include personal selling, telemarketing and emails.

Adopting from media multiplicity premise of IMC, Tafesse (2013) is the only study addressing the use of IMC in tradeshow. The study adopted IMC theory into multi-stage process of trade show and suggested positive relationship between each media usage stage and tradeshow performance in terms of selling, customer relationship, product promotion and media publicity. However, it did not address the interaction or coordination between marketing communication and tradeshow efforts, hence neglecting the variances of performance outcomes under different conditions of tradeshow resources.

2.3. Conceptual Framework

This study aims to contribute to trade fair's performance literature streams in two aspects. First, it opens a framework of tradeshow resources built upon marketing capability in the phases of planning, execution and performance measurement. Secondly, the study employs Fuzzy Set / Qualitative Comparative method which has not been used previously in tradeshow performance studies and would offer an alternative perspective to solve performance optimization problem.

From the practical perspective, finding the mechanism of transforming marketing inputs into desired performance outcomes has been both a challenge and an interest for marketing managers. For theoretical framework to be useful for practice, it needs to be a robust but simple enough to be explained, disseminated to different stakeholders and hence easily applied in their day to day work. Marketing engineering approach provides such a framework of finding marketing response model that convert marketing inputs, competitive actions and environmental variables into outputs (Lilien and Rangaswamy, 1998). This study, in a simple description, used marketing resources of planning and implementation capability in the context of trade fair exhibition to achieve optimal performance outcome. As firms have different outcome definitions that might be expected from trade fair activities, it's beneficial for them to be able to manipulate the allocation of resources to achieve the preferred variance in outcomes. The figure below summarizes the framework of this thesis with main two drivers of performance outcome: Planning and Implementing Capability in the context of fair marketing.

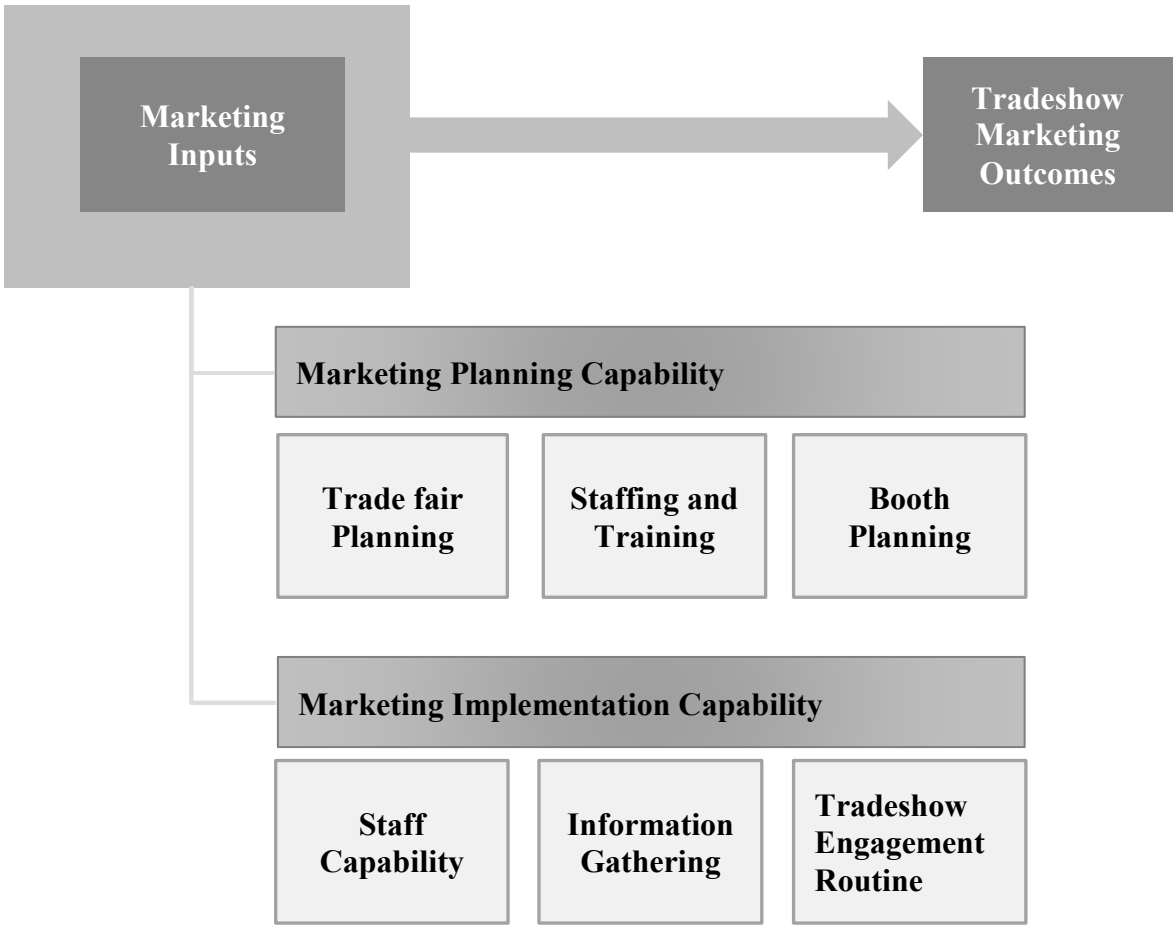

Figure 2. Conceptual Framework

3. EMPIRICAL RESEARCH

3.1. Methodology

Previous studies in tradeshow performance topic often employ regression analysis to explore the relationship between independent variables and tradeshow performance outcome (Ling-yee, 2007; Sarmento, Farhangmehr, & Simões, 2015) or Structure Equation Modeling Technique to formulate the latent constructs of tradeshow performance (Hansen, 2004; Ling-yee, 2010). However, the conventional statistical approaches only seek out for symmetrical relations between the dependent and independent variables and hence assumes that positive and negative outcomes are led by opposite path of dependent variables (Miranda, Tavares, & Queiró, 2017). However, this assumption might not hold true and there stands the need for an alternative method to handle asymmetrical relationship between the objective outcome and its negation. Fuzzy-Set/Qualitative Comparative Analysis is such solution to handle the asymmetrical relationship that common quantitative modeling techniques would fail to capture as the complete solutions include separate configurations for the positive and negated outcome. In addition, FS/QCA method is known for its application in the case of small sample size by examining each cases with researcher's qualitative insights. Since FS/QCA methodology remains a less popular method in social research, this section provides an overview of key concepts and measures of this method, in comparison with conventional quantitative methodology to defend the method choice for this study.

Qualitative Comparative Analysis

Ragin (2014) discussed key differences between the conventional quantitative methods and Qualitative Comparative Analysis and also highlighted the contribution of FS/QCA method to social researches. The below table summarizes Ragin's (2014) discussion on the differences between the two methods; this summary also defends the methodology choice of the thesis to offer an alternative perspective on trade show performance literature stream.

	Conventional Research	Comparative Research
Variables vs. Sets	Variables: (+) capture degree of variation	Sets: (+) capture the membership/ classification using also qualitative insights
Measurement vs. Calibration	Cases' scores have their meanings relatively to another	External standard or qualitative breakpoint exists to define membership degree of the cases
Dependent Variable vs. Qualitative Outcome	Research objective is to explain variation of dependent variables	Research objective is to assess the cases' degree of membership in a defined qualitative outcome.
Given vs. Constructed Population	Given population is ideal to ensure randomization	Constructed population are used to build cases for both positive and relevant negative cases.
Correlations vs. Set-theoretic relations	Correlation is symmetrical, it treats the existence and absence of cause and effect as equal.	Set-theoric relations is asymmetrical. Positive cases cannot be derived from Negative cases and vice versa.
Correlation Matrices vs. Truth Table	Correlation Matrices are used to examine bivariate correlation.	Truth Tables are used to examine and summarize the cases exist in the given data set.
Net effects vs. Causal Recipes	The independent variables' effects on dependent variable are isolated.	Causal conditions are seen as a combination to generate outcomes

Table 1. Comparison between Conventional Research and Comparative Research (Ragin, 2014)

Many studies have attempted to use Qualitative Comparative Analysis method as alternative solution to study research problems as it emphasizes the causal relationship between resources and marketing outcomes (Vassinen, 2012). This method is aligned with marketing engineering approach (Lilien and Rangaswamy, 1998) which aims to discover the marketing response model converting marketing inputs into marketing outcomes. Marketing Engineering Approach does not only deliberate quantitative marketing response model but also guides qualitative model, which enables the researchers to represent qualitative insights to explain marketing outcomes (Lilien and Rangaswamy, 1998). The approach broadly describes the process of using and integrating marketing assumptions, data, knowledge, software and techniques to improve decision making process. FS/QCA method aligns with this approach, adding values to the decision-making process by addressing demand for knowledge on complex configurational causation.

As previously mentioned as one of the advantages of this method, QCA allows the small-N nature of data in searching for causal regularities. This is beneficial for the research settings with several aspects to be materialized in questionnaires and required selective respondence. In addition, in contrast with the regular statistical modeling methods, QCA research strategy is distinguished by its holistic approach that allows the cases to be interrelated to the others, the configurational causality of combination of variables, and the continual dialog between researchers and data in calibrating process and causal narrative during research findings (Ragin, 2014)

Configurational Causality

In Qualitative Comparative Analysis, the main subjects under studies are configurations. By definition, a configuration is a combination of conditions or input measures that lead to the existence of outcome. Configurational approach is an important concept for business research, especially in organizational theory and strategy research, since the approach offers holistic and multidimensional view of the organization, enabling the studies of performance and other business outcomes based on interconnected patterns and profiles instead of isolated independent variables (Fiss, 2007).

In FS/QCA, causality is not assumed to be symmetrical, and the presence and absence of the outcome cannot be interpreted through one explanation to another. In the other words, Set Theory suggests that the membership in one set does not equal to non-membership in

the other set. FS/QCA looks into both conditions of positive and negative outcomes separately, offering more robust explanation of asymmetrical relation than common statistical techniques such as regression modeling. Each case in QCA is represented by fuzzy values or the degrees of memberships in different studied conditions. The fuzzy values, different from independent variables in conventional statistical approach, does not tell how the cases are different from each other, but only to indicate the degree of belongingness to certain set of conditions. The expected result from this process is to reveal the pattern of combinations of membership degrees in the involved conditions; hence, suggestions on the causality of the outcome are made and explained according to the discovered patterns (Fiss, 2007; Ragin, 2014).

Truth Table Construction

Fuzzy-set method provides an approach to find the alternative configurations to achieve a single marketing outcome via a truth table, representing all the possible configurational paths leading from the condition inputs to the same outcome. According to Ragin (2014), the truth table serves the purpose of organizing the data by different combinations of values on the conditions on the table columns. Each row is assigned with an output value, which is calculated from the output of each cases sharing the same combination of conditions. From the truth tables, researcher then identifies the combinations that share the similar output scores. After that, the summary of configurational paths is made so that the most popular configurations found among the cases presents the model that researcher looks for.

Necessity and Sufficiency of Causality

Fuzzy set Method allows necessity and sufficiency to be studied as set-theoretic relationships. Set X is a subset of Y if the membership scores of cases in X are less than or equal to the membership scores in Y. There are 2 types of fuzzy subset relationship that exists between condition inputs and outcomes: sufficient and necessity. While sufficient configurations are one or more conditions that lead to the outcome, necessary configurations appear in all path leading to the outcome. From the truth table, necessary configurations are detected by high coverage among the cases, while sufficient configurations are defined by the consistency, assuring the configurations lead to the outcome systematically (Korhonen, 2016). These two figures of solution coverage and consistency represents the model-fit of the solution.

Fuzzy Membership and Data Calibration

In Fuzzy-Set, the cases are presented as degrees of membership varying from 0 (full non-membership) to 1 (full membership). The original crisp-set is based on Boolean approach with sets in logical values 1 (TRUE) or 0 (FALSE) (Ragin, 2014). However Fuzzy Set is a broadened method to include membership scores between 0 and 1, defined by property spaces between the scores and there exists a threshold to define full membership and full non-membership. The below table taken from Ragin's work (2014) summarizes the types of fuzzy sets and the interpretation of membership degree values.

Crisp Set	Three-value fuzzy set	Four-value fuzzy set	Six-value fuzzy set	Continuous fuzzy set
1 = fully in	1 = fully in	1 = fully in	1 = fully in	1 = fully in
0 = fully out	0.5 = neither fully in or fully out	0.67 = more in than out	0.9 = mostly but not fully in	$0.5 < x < 1$ Degree of more in than out
	0 = fully out	0.4 = more out than in	0.6 = more or less in	0.5 = crossover: neither in or out
		0 = fully out	0.4 = more or less out	$0 < x < 0.5$ Degree of more out than in
			0.1 = mostly but not fully out	0 = fully out
			0 = fully out	

Table 2. Different Types of fuzzy sets

(Ragin, 2014)

As a qualitative comparative analysis method, calibrated data is influenced by researchers' qualitative knowledge to calibrate membership scores. The calibration process should be well-documented and rationalized to ensure the objectivity of the procedure so that the same results could be obtained by another researcher when that person follows the documented steps for calibration. There are two methods for calibration; the first method, Direct Calibration, corresponds to the three-value fuzzy set which bases the calibration on

three qualitative anchors of fully in membership, fully out member ship and cross-over point. Secondly, the Indirect method qualitatively groups the cases corresponding to the values of the sets. In the data analysis chapter of this thesis, the text explains the calibration process using Indirect method.

The validity and reliability of FS/QCA method is ensured by following the good practice for FS/QCA research suggested in Schneider & Wagemann (2010). The calibration and analysis in R studio are documented in the empirical research chapter and appendix transparently so that other researchers could obtain same results following the same process. In addition, the evaluation of solution's validity is discussed later in details as a part of result presentation.

3.2. Data Collection

Data collection procedure

The data for this research were collected via an online survey of 45 questions sent to fair exhibitor contacts provided by Finnish Trade-fair Association (Messukeskus). Estimated time to complete the survey is about 20 minutes, and in total 53 responses were received, from 4 Business to Consumer fairs: Nordic Travel Fair 2018, Spring Fair 2018, International Boat Fair 2018 and Tampere Horse Fair 2018. However, three respondents were excluded for the analysis since they are from non-profit organizers whose purpose of exhibiting does not fit in with the rest of the respondents and also the goal of this research. The questions in the survey are chosen based on literature review on trade fair's performance measurement to explore possible causal conditions. Throughout the process of data validation and minimizing property spaces for FS/QCA model analysis, not all the questions are used for the final model solution; however, full questionnaire is presented in the appendix. The profiles of respondents are reported in the below table.

Sample Characteristics	Number of Respondents (N = 50)	Percentage of Total
Job titles		
Top Management	24	48%
Middle Management	13	26%
Specialist	9	18%
Staff	4	8%
Company Size		
> 500 employees	2	4%
100 – 499 employees	4	8%
50 – 99 employees	2	4%
11 – 50 employees	17	34%
1 – 10 employees	25	50%
Exhibiting Frequency		
Three times a year or more	23	46%
Twice a year	15	30%
Once a year	9	18%
Once every two years or less	3	6%
Attended Fair		
Spring Fair 2018	20	40%
International Boat Fair 2018	17	34%
Nordic Travel Fair 2018	12	24%
Tampere Horse Fair 2018	1	2%

Table 3. Sample Description

Outcome Specification

Outcome of the tradeshow performance was asked in a few questions in order to search for the best measurable outcome. In the questions regarding performance outcome at the fair, both hard measure and soft measure were applied. To arrive at the final selected questions to measure performance outcome, the researchers studied previous literatures on trade-fair outcome measurement and adopted the measures to this study. However, the collected quantitative (hard) measures regarding sales and contacts could not be used for analysis in

this study due to two reasons: exhibitors have diversified objectives for their participation and the quantitative measures are specific to certain objectives; secondly, many exhibitors do not have systematic method to keep track of quantitative results. Hence, two soft measures of Perceived Performance and Achievement of Objectives are used in this QCA study. In fact, Perceived performance as dependent variable is tested in Hansen (2004) with the model resulted in positive association between Overall Perceived Performance and Tradeshow Performance based on the key activities at the fairs. On the other hand, the achievement of objectives as outcome of trade fairs has been studied in other researches such as Blyth (2000) and Ling-Yee (2007).

Regarding perceived performance, the respondents were asked to rate how satisfied their companies were with their overall performances at the fair, in a scale from 1 – 7 with 1 = "very dissatisfied" and 7 = "very satisfied". On the other hand, to explore how exhibitors achieved their objectives, another question asked respondents to identify the objectives that were set prior to the fair participation and in the case of chosen objectives, the respondents then rated how well their companies achieved each one. In addition, the survey was interested in whether the companies were able to record any figures of outcomes, or hard measures, such as number of contacts acquired during the fair, number of visitors that exhibitors were able to talked to, number of business transactions finished at the fair and also the revenue gained from the fair. However, the results showed that not all companies keep track of the hard-measures for the outcome.

The selection of conditions

The below table displays the maximum property space which is also the initial list of conditions contained in the survey. The conditions were selected through extensive literature research representing several trade show aspects and are believed to be causal to the exhibiting performance.

Condition Name	Text	Sources
Planning time	Length of planning duration before the fair	
Personnel Resources	Number of people involved in fair preparation (internal and out-sourced)	
Material Utilization	How much of existing material transferred and reused from fair to fair	
Booth Area	Booth Area in square meters	(Alberca-Oliver, Rodríguez-Oromendía, & Parte-Esteban, 2015; Gopalakrishna, Lilien, Williams, & Sequeira, 1995; Lee & Kim, 2008)
Booth Theme	Existence of clear theme	
Booth Design Competitiveness	Perceived competitiveness of booth design	(Gilliam, 2015; Ling-yee, 2007)
Pre-show promotion capability	Variety of preshow promotions used	(Batra & Keller, 2016; Herbig et al., 2006; Tafesse & Korneliussen, 2013)
At-show promotion capability	Variety of at-show promotion activities used	(Batra & Keller, 2016; Herbig et al., 2006; Tafesse & Korneliussen, 2013)
At-show interaction capability	Variety of at-show activities to interact with customers	(Batra & Keller, 2016; Herbig et al., 2006; Tafesse & Korneliussen, 2013)
At-show sales promotion capability	Variety of at-show activities to used	
Follow up capability	Which of the below follow-up activities were used to after-show	(Batra & Keller, 2016; Herbig et al., 2006; Tafesse & Korneliussen, 2013)
Number of Follow up email	Intensity of follow-up by email	(Seringhaus & Rosson, 2004)

Time to follow up	Promptness of follow-up after the show	(Seringhaus & Rosson, 2004)
Follow up content	Follow-up content variety/ creativity	
Booth staff density	Number of booth staff	(Seringhaus & Rosson, 2004)
Booth staff diversity	Professional background diversity of booth staff	
Booth staff training	Training Hours for Booth Staff	(Lee & Kim, 2008; Seringhaus & Rosson, 2004)
Booth staff capability	Capability of Booth Staff	(Ling-yee, 2007)
Information Intelligence capability	Comprehensive usage of tradeshow information	
Information quality	Quality of information collected	(Sirén, 2017)
Participation fee	Participation Fee that your company paid for the tradeshow organizer	(Gopalakrishna & Williams, 1992; Seringhaus & Rosson, 2004)
Production Cost	Total Production and Logistic Cost for the exhibition	(Gopalakrishna & Williams, 1992; Seringhaus & Rosson, 2004)
Trade fair annual spends	Company's Annual Budget for Tradeshow Participation	
Trade fair annual % allocation	Company's Annual Budget for Tradeshow Participation	

Table 4. Initial Conditions

Calibration of Outcome

As briefly discussed in the outcome specification subsection, this study relies on two "soft" measures for the outcome variable as the numerical "hard" measures collected from respondents contain several missing data points. The lack of numerical return measures such as total business transactions, visitors' traffic or revenue generated from trade fairs indicates that exhibiting companies do not own solid method to measure their performance in this marketing event. On the other hand, it is also arguable that it is not necessary for companies who attend B2C trade fairs to collect these types of measures as they interact with great amount of non-customer visiting traffic and often have non-sale related objectives.

In addition, with FS/QCA method, only one outcome variable is allowed in a model. Therefore, a new outcome variable is created based on the Perceived Performance outcome and Objective Achievement outcome. Membership scores assignment for outcome is based partly on qualitative understanding of each case and partly on descriptive statistics value. There are cases where the companies were fully satisfied with overall performance of tradeshow, but on the other hand they did not successfully achieve any of the objectives, hence the case is not assigned full membership for the outcome. The below table illustrates the guideline for assigning membership scores to studied cases.

Outcome	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
General Outcome	four-value fuzzy set			
	0 / 0.33 / 0.67 / 1	0	Disappointment	The company are not satisfied with the performance at the fair and/or they do not find objectives as successfully achieved
		0.33	Modest Satisfaction	There are hardly any objectives that exceeded company's expectation, and general satisfaction is not at highest level
		0.67	Moderate Satisfaction	The company are generally satisfied with the performance at the fair but it is not consistent with how well they achieve the objectives, or vice versa.
		1	High Satisfaction	The company are very confident that they are satisfied with the performance at the fair and they exceeded a few objectives they have set

Table 5. Outcome Calibration

Following this calibration rule, the outcome of 50 cases were calibrated based on each respondent' answers of general satisfaction and their achievement level of objectives in question. It is logical to combine these two factors of general satisfaction and achievement of objectives to measure General Outcome as the observation shows the inconsistency of the factors in the cases where respondents indicated that their companies in overall were very satisfied with the result but on the other hand, they did not quite achieve the pre-determined objectives. The methodology FS/QCA is beneficial for the research as it enables researchers to combine qualitative observation in the cases to compute quantitative measures. The figure below shows the distribution of the cases on calibrated outcome

("OUTCOME"), with 18/50 cases (36%) with membership of either 0.67 or 1. The distribution of calibration has mean of 0.41 and median of 0.36.

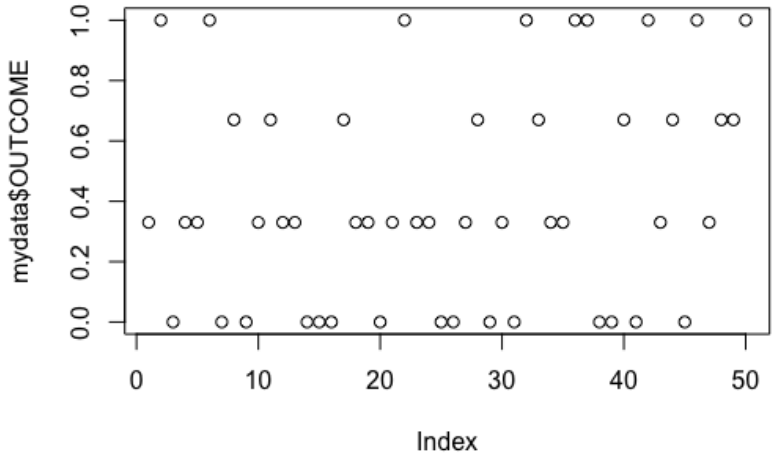

Figure 3. Outcome Calibration

Calibration of Conditions

In this section, each condition is discussed separately with the explanation of the method for calibration. This conditions which are discussed below is taken from the initial list of conditions; however, after the raw data was validated, all the numerical measures regarding financial investments are excluded due to missing data points. Also, many of the final conditions are the combination of initial conditions to capture the distinctiveness of condition while minimizing property spaces.

- **Planning Time**

Sufficient planning period is known as crucial factor for the success of any event organization, not only specifically for trade fair exhibitions. The planning period is asked in a multiple-choice question with categorical answer options: "less than 3 months", "3-6 months", "7-12 months" and "more than 12 months". Looking at the cases, no company started planning for the fair more than 12 months, and the long planning time of "7-12 months" is not popular. As observed, in the case of annual fairs, trade fair's organizers often start to welcome registrations one year before the fair, giving exhibitors adequate time to decide, register and prepare for the fair. Thus, we use 6 months as the cut-off and assign "0" to the cases in which companies started planning for the fair 6 months or less prior to the fair, and "1" is assigned to the rest of the cases. In total, 27 cases (54%) are assigned with the membership score of 1. In addition, the data shows that company who

exhibits more frequently spends less time preparing for trade-fairs compared to less-frequent participants. The below table summarizes the rules behind crisp set calibration.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Preparation Time	Crisp Set			
	0 / 1	0	Short Preparation Period	Company has 6 or less months to plan and prepare for the fair exhibition
		1	Long Preparation Period	Company has more than 6 months to plan and prepare for the fair exhibition

Table 6. Preparation Time Calibration

- **Booth Theme Complexity**

Exhibitors attending trade fairs have their stories that they want to communicate to visitors. The stories are often tied strongly with the objectives that companies aim to achieve through the exhibition, and they are told to customers across different touch points during the fair, whether it is a face-to-face conversation between booth staff and visitor, seminar presentations or the just the booth design itself. However, to deliver the message to majority of visitors, companies cannot rely on sending their staff to talk to every single visitor at the fairs. Instead, the booth itself should have the story embodied in the design theme of the booth, to deliver an explanatory message to the mass audience. When managers need to decide on any marketing campaign, advertising production or any marketing material design, they have to decide on the key message to be remembered by target audience once they are exposed to the touchpoints. As the story gets more interesting and engaging to visitors when there are different element and details involved, it is also more challenging for audience to process the message and remember main points.

Booth theme question asked respondents to select of themes that company embedded in their booths' design: "Company milestones", "Key products", "Important brand attributes", "Brand image or positioning", "The country or place of origin", "Company history", "Marketing campaign", "Creative concept" or "Others". The respondents are also asked to describe the booth theme in free text so that the researcher could get a better

understanding of the theme. In this research, as the purpose is to see whether the complexity of the booth theme affects the outcome of the tradeshow, it is decided that the condition is calibrated into crisp set. As a result, 27 out of 50 cases are assigned the membership score of 1 in this condition.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Booth Theme Complexity	Crisp Set			
	0 / 1	0	Simple	The booth is designed based on two or less themes
		1	Complex	The booth is designed based on more than three themes

Table 7. Booth Theme Complexity Calibration

- **Booth Design Competitiveness**

Companies participating at the fair compete for visitors' attention, and booth design and layout play such an important role in achieving this objective. If a booth is more visually attractive compared to key competitors' exhibition display, there would be more visitors to stop at and engage with the company further and it eventually influences the number of customers converted from those visitors.

Gilliam (2015) discussed the impact of exhibition booths and design elements on how exhibitor achieving their objectives at trade fair. The key elements of booth design are adopted from this study and brought into the question that asked respondents to evaluate their booth design competitiveness on five constructs of overall design: lighting, design complexity, the use of empty space between design elements, and the overall ability to tell the story. By analyzing each respondent's answer, the researcher is able to calibrate the condition of Booth Design Competitiveness on a crisp set following the rules elaborated in the below table. Within 50 study cases, only 14 cases are assigned with the membership score of "1" in this condition.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Booth Design Competitiveness	Crisp Set			
	0 / 1	0	Not Competitive	Company is not very confident of the booth layout elements compared to those of competitors
		1	Competitive	Company is very confident of the booth layout element compared to those of competitors.

Table 8. Booth Design Competitiveness Calibration

- **Fair Engagement Focus**

Previous literatures often examine trade fairs in three stages, Pre-show, At-show and After-show, following the personal selling framework where prospects are exposed to the brand and later converted into customers throughout the selling stages. Categorical questions were used to explore the types of activities that company used to engage with prospects at each stage of trade fair; and the options given to respondents are drawn from previous literatures. As observed, there exists big difference in the variety of the activities before the show, during the show and after the show. The greatest number of engagement activities are found in the At-show stage corresponding to the conversion success rate during the show. Therefore, At-show engagement activities are divided into communication, interaction, and sales promotion categories in three separate questions. Communication activities contain one-way communication that tells the story to customers over different forms of marketing materials; Interacting activities on the other hand welcome visitors to response to the company by immersing them in the experience created by brand. In addition, a “call-to-action” is possibly deployed with sales promotion activities to convert visitors into buyers. Even in many cases in which companies do not have specific selling objective as they attend the fair, a “call-to-action” is a good technique to convert the prospects further down the purchase funnel.

Looking at all of the stages and activities, it was clear that they are connected parts of the marketing effort to engage the visitors or customers to the brands. Hence, the researcher combined these inputs from all the stages as single condition: Trade Fair Engagement. As a general expectation from previous studies, the more engaging the exhibition is, the better performance outcome is achieved. At the same time, it is expected that the engagement activities are comparable to the booth investment, as bigger companies have much more budget to afford spacious booth areas and implement more visitor-engagement activities. Therefore, this study aims to evaluate the company's resource focus on Engagement activities by compare the variety of activities with its booth areas. Small booth with various engaging activities is assigned with high membership score on trade-fair engagement focus; on the other extreme, large booth area with only basic engagement activities is consider less-focus on trade-fair engagement. It is decided that a four-value fuzzy set is used to calibrate this condition as the variance of engagement level make clear impact on the performance of exhibitors according to previous literatures.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Trade Fair Engagement Focus	four-value fuzzy set			
	0 / 0.33 / 0.67 / 1	0	Low engagement Focus	The investment on engaging activities does not match booth investment
		0.33	Modest Engagement Focus	The investment on engaging activities modestly matches booth investment
		0.67	Moderate Engagement Focus	The investment on engaging activities quite matches booth investment
		1	High Engagement Focus	The investment on engaging activities are sufficiently comparable to booth investment

Table 9. Fair Engagement Calibration

The distribution of fair engagement membership scores is illustrated in the below graph, with the mean of 0.44. Out of 50 cases, 9 cases are in High Engagement group, 12 cases in the cases in the Moderate Engagement group, 15 cases are in Modest Engagement group and 14 cases are in the Low Engagement group.

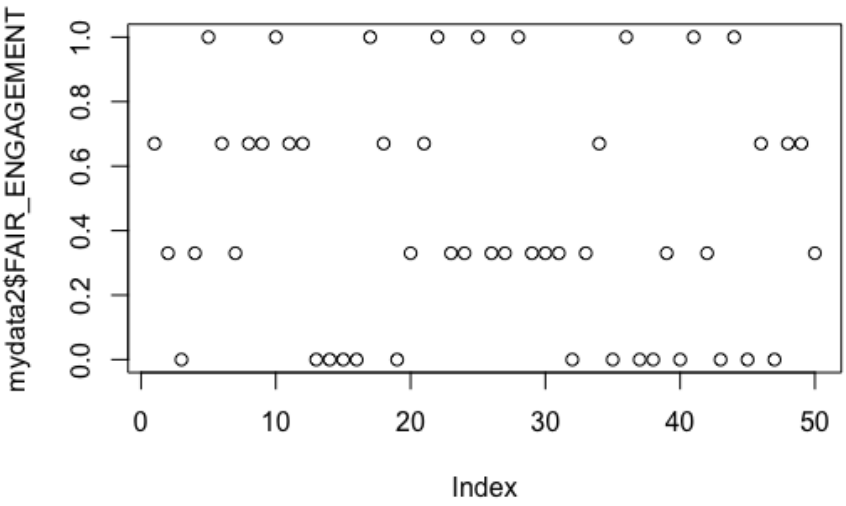

Figure 4. Fair Engagement Calibration

- **Staffing**

Personnel resource plays essential role in the execution of marketing activities. Company sometimes face the challenges of having sufficient financial resource to support variety of initiatives but at the same time do not have sufficient manpower to execute the activities. Previous literatures deliberate the importance of booth-staff density during exhibition; however, human resource is also essential in the planning phase and pre-show promotion stage. This study is interested in how the level of personnel quantity distributed in all the planning and execution phases of tradeshow would influence the outcome of exhibition; this includes both internal employees and external outsourced staff who involve in the planning and preparation phase as well as booth-staff during the exhibition. In addition, the staff level should be sufficiently equivalent to the investment on booth area, as companies need to make sure to have adequate staff resource to handle the workload of the exhibition and to maximize the use per square meter. Follow the similar method of calibration, Staff Resource condition is calibrated in a four-value fuzzy set. The assignment of membership scores follows the below definition table.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Booth Staff Resource Sufficiency	four-value fuzzy set			
	0 / 0.33 / 0.67 / 1	0	Under-staffed	The total numbers of staff (internal and external) for planning AND presenting at the booth per square meter are both low
		0.33	Modest Resource	Total number of staff (internal and external) for planning OR presenting at the booth, per square meter, is low
		0.67	Moderate Resource	The total numbers of staff (internal and external) for planning AND presenting at the booth per square meter are both satisfactory
		1	Abundant Resource	The total numbers of staff (internal and external) for planning AND presenting at the booth, per square meter, are both Abundant

Table 10. Staffing Calibration

Looking at the calibrated membership score distribution in the below graph, most of the cases, accounted for 72% of the sample, were under-staffed or modest level of staff preparing for and presenting at the exhibition. Hence, distribution of membership scores in staffing has the mean of 0.32.

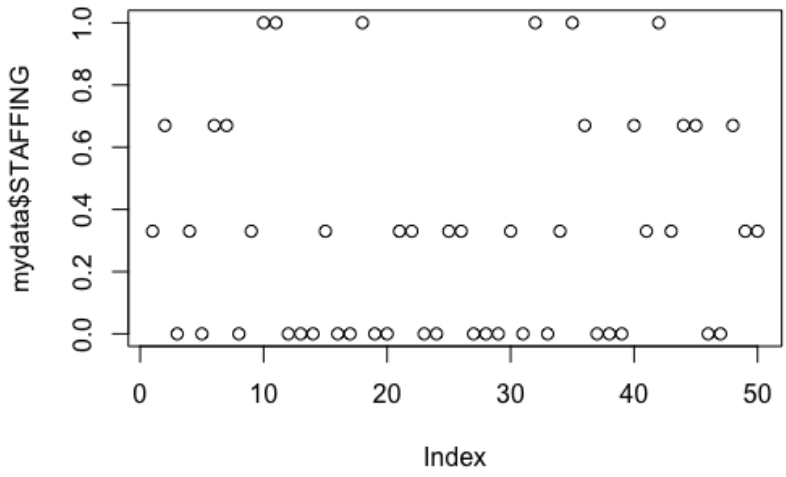

Figure 5. Staffing Calibration

- **Booth Staff Capability**

The importance of Booth Staff Capability is undeniable contribution to the performance of exhibitor at trade fairs, since booth staff represents the only human contact between the visitors and the brands. As tradeshow exhibition has significant similarity to retail experience, companies want visitors who stop at their booths to immerse in the experience that the brands have planned. In this study, booth staff's capability is evaluated by the respondents' perceptions of different areas in which booth-staff performance is significant. The components of this condition include the ability to answer visitors' questions, ability to arouse visitors' interests of the product, ability to listen actively to customers, their selling and interpersonal skills, previous fair experience and also the knowledge about cross-functions. The evaluation of each capability is asked in a 1-7 scale question, and the calibration is based on all of these capabilities' evaluation, using the four-value fuzzy sets illustrated in the table below.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Booth Staff Capability	four-value fuzzy set			
	0 / 0.33 / 0.67 / 1	0	Low Staff Capability	Company is not at all confident about booth staff capability
		0.33	Modest Staff Capability	Company is less confident about booth staff capability
		0.67	Moderate Staff Capability	Company is moderately confident about booth staff capability
		1	High Staff Capability	Company is very confident about booth staff capability

Table 11. Booth Staff's Capability calibration

Below is the membership score distribution of calibrated booth-staff capability condition, mean is equal 0.48

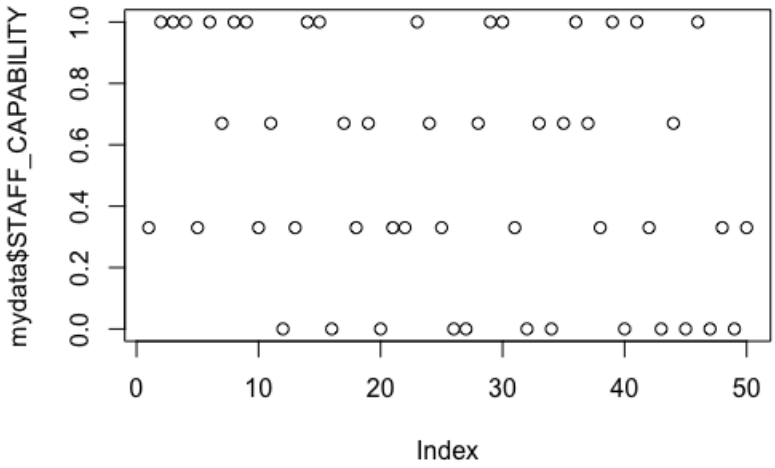

Figure 6. Booth staff's capability calibration

- **Staff Training**

Most companies attending trade fairs send their internal employees to the fair as booth-staff, as they have adequate knowledge of the brand and the products to communicate and interact with visitors. Looking at the functions that booth-staff are usually come from: Sales, Marketing and Customer Services, it suggests that they have good skills for interacting with customers as well as knowledge about product and the company. However, as companies want to provide visitors with a consistent and professional fair experience, training for staff before the fair, either in the forms of formal training or meeting is necessary to make sure visitors are greeted and guided through the experience with the consistent service from booth personnel. In addition, since not all the booth personnel have had experience of trade-fairs prior to the show, the training would ensure that the staff has necessary understanding of how they can best interact with visitors to be the coordinator of visitors' booth experience. Staff training condition is calibrated using crisp-set, with "0" and "1" values assigned to each case that the training was not provided and provided to booth personnel prior to the fair. In total, companies in 22 out of 50 cases provide certain training to booth staff while the absence of this condition presents in the rest of 56% of the cases.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Staff Training	Crisp Set			
	0 / 1	0	Trainings are not provided	No training is provided to booth staff
		1	Trainings are provided	There are certain trainings provided to booth staff

Table 12. Staff training calibration

- **Information Gathering Focus**

With the shift of Trade-fair from traditional to modern fair, from direct selling focus to multi-purpose fair, companies realize that trade fair is a great place to gather information and use it for strategic decision making. A 7-scale question asked respondents to identify how the fair information was used in their companies; based on that, the condition "information focus" is calibrated to evaluate the focus of company in analyzing the information acquired at trade fair to support business decisions. The question and its constructs are adopted from Ling-yee's study in 2007 on the impact of marketing resources on tradeshow performance. As a result, this study uncovered a link between the usage of acquired information as post-show follow-up act and the outcome performance measured by objective achievement. This condition is calibrated in crisp set as there is not sufficient information to distinguish the variance in the company's focus levels on intelligence gathering at trade fair. Following the definition in below table, 24 cases out of 50 (48%) are assigned in the group of Information gathering focus.

Condition	Type of Set	MBs Scores	Definition of MBs Scores	Explanation of MBs Scores
Information Gathering Focus	Crisp Set			
	0 / 1	0	Do not focus	Company does not use information gathered at show for business decision
		1	Focus	Company uses the information gathered at show for business decision

Table 13. Information Gathering Focus calibration

3.3. Data Analysis

The purpose of this section is to briefly describe the technical steps to discover configurations leading to the high and low performance outcome of tradeshow. Calibration data or membership scores are firstly coded in an excel table following the calibration process highlighted in the previous section, where each row is one case and each column is one set of outcome and conditions. After that, the table is loaded into R studio where the analysis is carried out using the QCA package developed for R development environment.

From this stage, the analysis consists of two parts: plotting truth table and minimizing truth tables to produce solution models for the Outcome (high performance) and Negated Outcome (low performance). The consistency cut-off is set to 0.95 as it is recommended in previous studies, representing the consistency of solution. Following standard analysis process of QCA method, complex, intermediate and parsimony solutions were calculated. Complex solution provides the strictest explanation of the outcome, however as the name describes, it is the most difficult to make interpretation due the high number of causalities in all configurational paths. On the other hand, parsimony solution provides the weakest explanation of the outcome but can be used for the straightforwardness of causality. In addition, intermediate solution positions between these two extremes, using the researcher's qualitative insights to specify the direction by identifying necessary conditions to be included in the outcome.

3.4. Results

High Perceived Performance of Trade show

Following the procedures with QCA package in R to recode the calibration, construct truth table to discover patterns of configuration, the analysis provides complex, intermediate and parsimony solutions or models. The complex solution contains of 14 configurations, providing the consistency of 1.00 and coverage of 0.54. The consistency is at its best, however, the coverage shows that only 54% of the cases are presented by this model. As previously discussed, the complex solution has too many configurations with causal complexity within each, making it hard to interpret. Additionally, from a practical perspective, even though complex solution scores very high in consistency, the number of cases that fit into this model is only few and thus the model has low coverage, making it difficult to be applied in the practice (Ragin, 2006). On the other hand, it is easier and more useful to use parsimony solution to explain outcome with causality. The parsimony solution has consistency of 0.88, lower than in complex solution, however, appears more reliable with better coverage of 0.71. With 8 conditions in the model, the truth table has total $2^8 = 256$ rows, however, 22 rows were omitted since there was no empirical cases to represent the row. As the loose solution of parsimony solution comes from the procedure of using logical remainders to construct the solution, 22 logical remainders are the indicators for how reliable parsimony solution is for interpretation. The intermediate solution is not used in this study as it requires a directional vector that identify necessary conditions to be included in the model.

Below is the configuration of Parsimony solution, followed by summary table. Noted that in this FS/QCA model presentation, upper-case condition's name represents a Presence of condition, whereas the lower-case condition's name represents an Absence of condition. Same logic is applied to positive outcome (OUTCOME) and its negation (outcome). In addition, the notation "*" indicate combination of condition or logical "AND" in a configuration, while notation "+" corresponds to logical "OR" to separate different configurations in the model.

Configuration of High-performance outcome:

DESIGN_COMPETITIVENESS*info_gather +
PREPARE_TIME*STAFFING*INFO_GATHER +
theme_complexity*FAIR_ENGAGEMENT*staff_training +
DESIGN_COMPETITIVENESS*staff_capability*fair_engagement +
prepare_time*THEME_COMPLEXITY*STAFF_CAPABILITY*FAIR_ENGAGEMENT
⇒ OUTCOME

Solution Consistency: 0.881
Solution Coverage: 0.711

	Configurations	Cases	Consistency	Raw Coverage	Unique Coverage
1	DESIGN_COMPETITIVENESS* info_gather	5	0.868	0.210	0.113
2	PREPARE_TIME*STAFFING* INFO_GATHER	3	0.901	0.145	0.129
3	theme_complexity* FAIR_ENGAGEMENT* staff_training	3	0.771	0.161	0.145
4	DESIGN_COMPETITIVENESS *staff_capability*fair_engagement	2	1.000	0.129	0.048
5	prepare_time* THEME_COMPLEXITY* STAFF_CAPABILITY* FAIR_ENGAGEMENT	4	1.000	0.210	0.145

Table 14. Configurations of High-Performance Outcome

The first configuration shows that highly competitive booth design combined with the lack of focus on information gathering would lead to the positive performance of tradeshow. It can be deductively interpreted that when the exhibitors invest on the booth scape design to

attract visitors, they are likely to focus on the visitor engagement as the objectives rather than collecting and analyzing tradeshow information. In fact, we are not looking closely in explaining why the lack of information gathering focus appears in the configuration, as the test of necessity shows low consistency, coverage, relevance of the necessity of negated condition of Information gathering focus in high performance outcome. However, it is possibly interpreted that exhibitors have either Information Gathering or Booth Competitiveness as their objective: while a company focus on the booth design competitiveness to optimize visitor touchpoint at booth, they might not be extensively focus on gathering intelligence at tradeshow.

Interestingly, although the absence of information gathering focus appears in the first configuration, the condition itself is the part of the second configuration, together with sufficient preparation time and adequate staffing resource. This finding suggests that exhibitors who put their focus on intelligence gathering at trade fair achieves high performance outcome with sufficient time for preparation and enough staff who are the information collectors during the fair. The process of using tradeshow information requires resources in all the stages of information acquisition, information dissemination, information quality evaluation and analyzing data. (Bettis-Outland, Johnston, & Dale Wilson, 2012). In order for the intelligence objective to be successfully deployed at trade fairs, companies should consume sufficient planning time to identify the type of information that is interesting for the company. Next a plan of how to acquire that information during and after the show is made, followed by a blue print of necessary steps to analyze and disseminate the insights within organization to ensure that acquisition effort is worthwhile. In this process, staffing resource plays an important role in acquiring the information, as they gather information through both formal sources such as seminars, panel discussions and also informal sources such face-to-face conversations, messages, emails with customers or peer professionals. Hence, exhibitors with intelligence gathering focus might even need more staff than other companies as they need to balance between the need of having staff at the company booth and having staff elsewhere in order to maintain good booth representation as well as to acquire information outside of the booth.

The third configuration shows the importance of trade-fair engagement in the high-performance outcome of tradeshow. This path is certainly not a surprising causality as fair engagement has been received great attention of tradeshow's researchers for many years.

Similar to design competitiveness, fair engagement condition is found in two configurations leading to favorable outcome. At the same time, the necessary test shows a low necessity consistency and coverage for the two negated conditions, and thus we cannot conclude that simple theme or lack of staff training contributes to the high perceived performance of tradeshow. On the other hand, when we look at the necessity test of Fair Engagement condition, the consistency of necessity, relevance of necessity and coverage are significantly higher than the same measures for the two negated conditions.

The fourth configuration is quite similar to the first one, indicating the importance of Design competitiveness as a key factor for the high-performance outcome of trade fairs. In addition, it is remarkable that even with poor fair engagement and poor staff capability which both appear in other configurations, the exhibitor with strong design competitiveness could still achieve a good result out of tradeshow, confirming the importance of booth design in delivering exhibition's performance. Looking back to literatures, we also see that this argument is supported as the booth design is always at the center of tradeshow preparation, and it is the gate to get visitor attention before any fair engagement activity could start to convert them further through the tradeshow stages.

In the fifth configuration, we see the presence of Trade Fair Engagement again, together with Theme Complexity and Staff Capability. In addition, one negated condition is present, preparation time period. The negated condition suggests that long preparation period is not needed as long as the company has succeeded in other aspects of the fair: having a strong story to communicate, good staff capability and deployment of engagement activities. This configuration stands true for exhibitors who participate in several fairs already every year, thus they have a system for being efficient without a long preparation period. Moreover, this path suggests that when the brand story is complicated, not a simple message, exhibitors need to make sure they have skilled staff and engaging activities to communicate the story successfully to booth visitors. In contrast, as can be interpreted further from this finding, when the booth theme is straightforward, exhibitors can make the communicated message stick easily without much enforcements to make visitors remember.

Low perceived performance of tradeshow

The same procedure is replicated to explore the causalities of low perceived performance outcome. The complex solution consists of four configurations with consistency level of 0.98 and solution coverage of 0.55, again making it complicated and impractical solution to interpret; therefore, the parsimony solution is used for further interpretation. There are 6 solutions to explain negated outcome due to existence of model ambiguity; this ambiguity is an unexpected result of analysis process due to the limitation of QM (Quine-McCluskey) algorithm that is used in popular QCA software and also in the QCA R package used in this thesis. Ambiguous models include two parts: main configurations presenting in all models and ambiguity parts that is exclusive to each model. To address the problem of model ambiguity, it's guided that the documentation must be transparent on the selection of model for interpretation and full data on model-fitting should be presented (Baumgartner & Thiem, 2017).

This thesis chooses one model among the ambiguities, ensuring that the model does not conflict with overall interpretation of the results. In addition, the selected model yields the highest coverage of 0.61 and also the highest consistency of 0.9. This solution is presented as below where the main configurations that appeared in all six solutions are the first three and the later three paths inside the brackets are distinctive from other ambiguous solutions. The full record of other five models is presented in the Appendix.

M6:
STAFFING*design_competitiveness*info_gather +
prepare_time*theme_complexity*design_competitiveness*INFO_GATHER +
staffing*design_competitiveness*fair_engagement*INFO_GATHER +

(PREPARE_TIME*staffing*staff_capability*STAFF_TRAINING +
THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEME
NT +
PREPARE_TIME*theme_complexity*design_competitiveness*fair_engagement*staff_tra
ining)
⇒ outcome

Solution Consistency: 0.901

Solution Coverage: 0.613

	Configurations	Cases	Consistency	Raw Coverage	Unique Coverage
1	STAFFING*design_competitiveness* info_gather	4	0.825	0.159	0.034
2	prepare_time*theme_complexity* design_competitiveness* INFO_GATHER	3	0.890	0.091	0.046
3	staffing*design_competitiveness* fair_engagement*INFO_GATHER	4	0.929	0.147	0.068
4	PREPARE_TIME*staffing* staff_capability*STAFF_TRAINING	4	0.910	0.114	0.000
5	THEME_COMPLEXITY* design_competitiveness* staff_capability* FAIR_ENGAGEMENT	5	1.000	0.193	0.034
6	PREPARE_TIME* theme_complexity* design_competitiveness* fair_engagement*staff_training	4	1.000	0.125	0.011

Table 15. Configurations of Low Performance Outcome

The first configuration shows that the absence of design competitiveness, information gathering focus combined with sufficient amount of staff would lead to low perceived performance outcome. This links to the previous discussion that companies attending trade fairs might differ in strategy; while some companies focus on booth attraction and visitor engagement, others participate in the fair to gather information of market, customer demands or competitors. When neither of the strategy is taken place, companies are likely to get negative outcome from the tradeshow, even with sufficient amount of personnel supporting the fair.

The second and third configurations suggest similar positions, with the presence of Information Gathering condition combined with other negated conditions. In addition, both configurations have the presence of the negated condition of design competitive, together with the same pattern found in the first path, suggesting that the lack of design competitiveness is a critical condition leading to negation of high-performance outcome. On the other hand, when an exhibitor concentrates on information gathering without the presence of other necessary conditions to optimize their intelligence strategy, for instance insufficient manpower or the absence of engagement activities to facilitate information collection from visitors, the strategy or mindset only could not deliver the expected outcome. As previously discussed in the section of High-performance outcome, Information focus works for exhibitors who invest on the preparation time and personnel resources; thus, while these sufficient conditions are absent, the focus on information gathering would trigger the low performance at trade fairs.

The fourth configuration of the solution indicates that the absence of staff capability and sufficient quantity of staff contribute to low-performance outcome. Instead, staff training and preparation time seem not helpful in achieving good performance at trade fairs. While Staff Training condition appears only once in the configurations for low performance outcome, long preparation time shows up twice, indicating that long preparation period could be a valid factor for Low-performance outcome. As an attempt for explanation, long preparation period could impact the performance at fair as the project could face difficulties to gather staff focus and reduce efficiency of the tasks that might only need a few intensive days to get done. In the projects that are carried on for a longer period than they need, loss of communication and records might occur and thus impact the efficiency and effectiveness of the execution. In addition, weak capability of booth staff and insufficient amount of personnel lead to low perceived performance, and the combination of absences is impossible to be compensated by adequate training.

In the fifth configuration, we could see that the complex theme, complicated messages combined with less competitive booth design and weak staff capability lead to unfavorable outcome. From the communication perspective, when the message is complicated, the tools or medians to deliver the message need to be effective; otherwise, the message would not be perceived successfully by the audience. Moreover, even though fair engagement is certainly a key element to improve exhibitor’s performance at trade fairs, they could

become only meaningless and loosely engaging activities without highly skilled staff to coordinate the experience.

Considering all previous justifications, the sixth configuration is expected to yield low performance outcome due to non-appearance of key factors such as design competitiveness and fair engagement while having the long preparation period. Looking at both models for High-performance outcome and its negation, we could see that while the causal relationship is not symmetrical in the high-performance outcome model and its negation, the key elements of trade fairs displayed in the configuration consistently. The Discussion chapter would further deliberate the findings to formulate best practice for exhibitors at trade fairs.

Evaluation of the goodness of solution

In this section, the goodness of solution is evaluated based on the standard of good practice of FS/QCA reviewed in Schneider and Wagemann's (2010). This study follows exploratory research design, in which all of the possible conditions are listed based on extensive literature research. After that, similar factors are grouped into one preliminary condition to be added to the survey. The process is then replicated one more time after the raw data collection, to reduce the property space and also to create the conditions that could be meaningful in practice. Then the calibrating process is documented in details in the chapter of Data Collection.

Regarding reporting, to ensure the transparency of research, this thesis reports calibrated data, truth tables and consistency and coverage measures in the appendix. This practice is to ensure that the same results could be achieved by any researchers who would replicate the entire study procedure. In addition, Schneider and Wagemann (2010) clarified the set of criteria regarding the selection and calibration of conditions as quality guidance for FS/QCA, which is discussed in the below.

First, the paper noted that "There should always be an explicit and detailed justification for the (non) selection of cases." The questionnaire was distributed online through Finnish Tradeshow Association's emailing list of exhibitors. The list includes almost 500 contacts and within those, 53 responses or cases were collected. In the analysis, 50 cases were used as 3 cases are from governmental organization who exhibited at the fair only for awareness

purposes, without any other objectives and performance concern. Thus, the decision was made to exclude those exhibitors, leaving only the cases that exhibitors clearly use trade fairs as the marketing tools.

Secondly, best practice in FS/QCA specified that: “The conditions and the outcome should be selected and conceptualized on the basis of adequate theoretical and empirical prior knowledge” (Schneider & Wagemann, 2010). This criterion is to maintain the alignment of FS/QCA with traditional statistical method even though, in contrast to the conventional quantitative method, FS/QCA allows the re-specification of the calibration as the continuous process throughout the research. As discussed previously in the research strategy section, the selected conditions are derived from literature research and later combined based on the theoretical and empirical justification of the researchers. Also, calibration rules are well documented to ensure transparency.

In addition, Schneider and Wagemann (2010) also insisted that the number of conditions should be kept moderate. It is also recommended that, similar to statistical method where too many independent variables would result in insignificant result, too many conditions in QCA generates huge number of logical remainders or it would produce the model that could not be interpreted and meaningless in practice. Following the best practice, this thesis also starts with several conditions and then reduced to the final property of 8 conditions. Moreover, good practice for reporting membership scores to the cases is followed by discussing each condition calibration in details in the empirical research chapter. In this research, no contradicting truth table was found thus the exclusion of contradicting truth table was not performed.

4. DISCUSSION

The purpose of this chapter is to create the connection between empirical findings with the conceptual framework and to formulate the best practice for trade fair exhibitors. The literature review chapter discusses how marketing resources affect the performance outcome, on the corporate level as well as at campaign level such as trade fair exhibition; this concept-level resources correspond to the group of trade-fair conditions being tested for the causalities of trade-fair's performance outcome.

Outcome measurement at tradeshow

As it is discussed in the literature review chapter, outcome measurement of tradeshow is the central topic for not only academic researchers but also marketing practitioners who involve trade fair exhibition in their company's marketing calendars. This study combines the satisfaction of overall performance and the objective evaluations of achievement levels of the objectives. It is discovered that while these two qualitative measures should represent each other, the survey answers show that not all companies are consistent in measuring the performance satisfaction and objectives achievement. For example, some answers show high satisfaction in overall performance of tradeshow but at the same times show low achievement level of all objectives. This inconsistency suggests two possibilities: first, not all companies have strong understandings and focus on measuring or monitoring performance outcome of trade fairs and second, outcome of trade fairs should be measured by multiple dimensions. In fact, the inconsistency of different outcome measures is not necessarily caused by mistake but rather different constructs of outcome dimension. Hansen (2004) also attempted to decode the performance outcome of trade fairs, however, using a different approach of construct categorization using key trade show's activities.

Outcome measurement is only enabled when the objectives for the exhibition are decided properly in advance. Though objective setting is known as the critical first step for marketing activities including trade fair exhibition, on the other hand, this step could also be the last item to visit, measure and develop after the execution of trade-show as it drives the entire process of planning, deployment and measurement of outcomes. Good practice for objective settings is not anymore unfamiliar to marketing managers, but it must be enabled by thorough understanding of the Fair organization, the market, the exhibiting

competitors and the pool of visitors, in connection with the company's core business and its resource. Whilst that it seems evident, there are companies who participate in trade fairs only to simply keep up with competition without considering other possible objectives. Despite that this argument might have been relevant in the past with limited channels to reach out to customers; however, in this marketing era with plenty of options and trade-fair is among the higher end of investment cost, companies need to be flexible and consider the carefully the channels to invest their marketing budget, rather than following competition's choices.

Design Competitiveness

It is not a surprise that Design Competitiveness is a decisive factor in achieving good performance outcome of tradeshow, even though there are not plenty of trade fair literatures that focus on giving directional booth design strategies to exhibitors. As general impression from this stream of literature, most studies emphasize on the atmospheric aspect of the booth with the involvement of booth staff to facilitate visitor experience. However, before visitors exploring the booth and interact with the elements offered by the brand, they have to make the decision of which booth to visit and which to avoid (Bloch, Gopalakrishna, Crecelius, & Scatolin Murarolli, 2017). There are several design elements constructing the booth design competitiveness, and exhibitors need to make the trade-off in choosing the elements to achieve the objective of the booth, as the exhibition booth cannot achieve all objectives or satisfy all groups of visitors at the same time (Gilliam, 2015). Again, clarifying the objectives is the foremost step in planning for trade fair participation and also in designing a high-performing exhibition display.

Undeniably, design competitiveness is developed critically from the planning and preparation phases. Companies which are used to exhibiting at trade fairs are likely to know better how they could become competitive in booth designs and learn from the competitive booths which at the same time attracts visiting traffic and facilitate smoothly the visitor experience inside the booth. On the other hand, companies with less experience or are the new comers in certain trade fair might gain an edge from secondary research to understand the competition. In addition, using agency specializing in producing trade-fair booth scape, exhibitors could utilize the industry experiences and design expertise to determine the optimal booth scape for their brands.

Trade-fair engagements

Trade-fair engagement is probably the most popular among the topics that have been studied regarding trade-fairs and are often reviewed in-depth as three tradeshow stages: before, during and after the fair. In this study, however, trade fair's stages are combined as one visitor engagement condition as the companies are by now well aware of these stages and it's up to exhibitors to control the arrangement of the activities to create an engaging experience for visitors. However, a full membership in trade-fair engagement is only assigned to the cases with strong focus on almost all the stages with variety of activities in promoting the fair, interacting with visitors during the exhibition day and following through with leads after the fair. Looking at the model solutions of outcomes, it's clear that fair engagement is a crucial condition to achieve the positive performance outcome.

The result shows that trade-fair engagement activities deliver good impact on the positive outcome of the fair when they are in the combination with booth theme complexity and staff capability. Unlike design competitiveness that does not have any link to other resources once it is all set up, trade-fair engagement contains human-involved activities and the variety of engagement activities should be adequate with the capability of the staff who coordinate the activities to build the booth experience for visitors. In addition, engagement activities are often inspired by the contents from the theme of exhibition, whether it is about the product, the brand, company founding stories or social causes; thus, the existence of the theme complexity allow trade-fair activities to build up around the theme and maximize their engagement effects. Interestingly, the model solution for negated outcome shows that with the lack of staff capability and design competitiveness, the complexity of exhibiting theme and variety of engagement activity would impact negatively on the outcome, indicating that the staff capability is a must-have factor for this combination to work. Overall, the combination of these three conditions show how conceptual framework is done in practice where the Marketing planning capability, represented by Booth Theme complexity condition, is combined with marketing implementation capability, embedded in trade-fair activities and staff capability, to produce high-performance outcome of trade fair.

Staffing, Staff training and Staff capability

Personnel resource is the core element for the performance of the firm and its individual marketing activities including tradeshow exhibition. Different from other resources in the

firm's possession, personnel resource has coordinating role in transforming any other resources into the outcomes. The focus on personnel resource in this study comes from extensive literature review where a variety of personnel related independent variables has been studied and tested to influence trade-fair and general marketing outcomes. This is relatable to daily business operation where many employees in marketing departments often have coordinating roles to make use of company's resources to deliver marketing objectives.

It is noncontroversial that the sufficient quantity of staff is important for the performance of the activity as long as the activity is not fully automated by computers. For trade fairs, sufficient quantity of staff in the planning phase ensures that company's exhibition at trade-fair is well-planned and promoted before the fair. At the same time, during the fair there should be enough staff at booth to coordinate visitor experience, talking to visitors to identify leads or to research competitor landscape representing at the fair, depending on the defined objectives. It is not uncommon during the rush hour at trade-fairs that the booths with low staff density have no choice but losing potential customers to other competitors as they could not provide visitors with welcoming greetings. On the other hand, exhibition booths that have too many staff can deliver counter effect as the visitors might feel threatened to enter the booth with awaiting salespersons. Therefore, task allocation for staff during the fair should be carefully considered to ensure that visitors experience a pleasant feeling to explore the fair but they are also timely assisted when in need.

Preparation period

The study shows that time required for trade fair participation varies among companies and it does not have causal relationship to the success of trade fair. On the other hand, long preparation period (more than 6 months) appears in the configurations of low performance outcome. This suggests two things: firstly, trade fair exhibition has become a routine for many companies and they become more efficient in planning for the event through the experience. Secondly, it indicates that the concentration on preparation is more critical than long planning period to the success of the project. To explain, long planning period could negatively impact the concentration of team members into the project thus lower the efficiency of the activity. Looking at the solution model, one configuration suggests that the success of trade-fair would need the presence of long planning period when there is the existence of information gathering focus. This combination could suggest that longer

planning period is beneficial in case companies employ competition landscape and industry research prior to the fair and they use the opportunity at trade-fair to collect marketing intelligence. This longer planning period might involve for example developing an experiment at trade-fair or training booth staff to follow a process to collect information they need during the limited time at the fair. From the theoretical perspective, preparation for the fair is enabled by the planning capability of the firm. Companies who understands its competitiveness and have clear understanding of the situation would be able to regulate preparation period for the fairs to optimize resourcing and performance.

Information gathering

Market intelligence is important because it supplies companies with the understanding about the external environment and it drives business strategies to sustain their position in the market or in better case, to gain an edge over competition. In this era of digitalization, quantitative data plays an important role in business intelligence, but qualitative insights gathered by talking face to face with customers, observing how competitors behave and expose should not be underestimated. Different from quantitative data which could be automated by nowadays online solutions, qualitative data requires a setup of market research studies that companies would either purchase from agencies or send their employees for information gathering tasks for example during trade-fairs. In either forms that the study would take, qualitative study requires time and effort to design and implement the studies in order to produce useful insights for their business strategies.

To make the participation at the fair information-gathering focus, it requires good implementation from the team. As it is suggested in the results, this condition only makes a return on outcome when it is enabled by the sufficient amount of staff to collect the information during fair and this step requires good implementation. Though the information collected at the trade fairs might not lead to any direct actions for companies, the routine for collecting information creates an addition of internal knowledge for the firm to strengthen its planning capability. It is essential for firms to generate a culture of intelligence gathering to enhance the total knowledge bank and it will be useful once the firm have an opportunity or ability to make sense of the data through researches and analyses.

5. MANAGERIAL IMPLICATION

This chapter summarizes the suggestions for management regarding the practical implication of this study. Firstly, the study has confirmed the crucial elements for the success of trade-fair participation: engagement activities at trade fair, booth design and staffing. In addition, the model suggests the route to success, the configurations to achieve the high-performance outcome. The configurations emphasize the importance of "single-minded" booth scape, meaning that the exhibition focuses on the investment of resource in one aspect instead of trying to be competitive in several activities at trade-fair. Also, the decision of channeling resources should be driven by clearly defined objectives of the entire trade fair project. In the other words, when company aims at generating traffic and drawing visitor attention, booth design competitiveness has to be the main focus of all activities, and thus most resources are allocated at booth to achieve this aspect to maximize the its return. Similarly, if the company's purpose is to gather market intelligence during the fair, staffing and time resources should be allocated to maximize the performance on this objective. While big companies could easily outspend small companies in several aspects of trade-fair investment and thus making it impossible for small players to be competitive with small budget. However, small companies could focus their resources to optimize the return-on-investment and still be able to build their own market share by doing outstanding job in the most important key areas.

Secondly, this study suggests the use of Fuzzy Set Method in marketing research as an alternative for conventional research methods. With FS/QCA, companies can take advantage of the enablement for small sample size and the integration of qualitative insights in a quantitative research. It also enables marketing managers to utilize their expert knowledge to interpret the collected response data in the useful direction for their model. Furthermore, the model practicality is straight forward for action implementation and it allows the unpretentious explanation across functions, as the research process is not far away from day to day practice which begins with the outcome and exploring the input combinations to deliver the expected outcome. In the end, the most important goal of researches in business practice is to help formulating directions and strategies to optimize business performance or gain an edge over competition; inevitably the application of FS/QCA fits in with this goal.

6. LIMITATION

In this section, the two limitations of the study are discussed, one exists in the collected data and the other is due to research method. First, the data in this study is collected as a result from online survey instead of a controlled experiment. The survey was sent out to contacts of exhibitors who had participated in the trade-fair organized by Finnish Association of Trade Fair in the previous year and the data is processed in the assumption that the contact's opinions well represents the opinion of company as a whole. In many cases, fair specialists or company management who have expertise in trade fair marketing are contacted; however, for some cases marketing staff were the ones answered the survey and thus their answers might not align with management's opinion due to the gap of expertise and perspective. In addition, the sample consists of exhibitors in four different fairs thus the difference of outcome expectations and marketing inputs of exhibitors could be the moderating factor but it is not discussed in the study.

The other limitation of this research is also the limitation of FS/QCA method itself, lying under the qualitative side of the method with the qualitative reasoning of the researcher presenting in the calibration of condition. Noting that the author of this study has not had commercial experience with trade fair marketing, the qualitative reasoning for forming condition by combining measures as well as for defining membership scores should be used with attention. Should the calibration be supported with qualitative interviews with expert in trade fair marketing, the validity might have been improved. Nevertheless, the methodology's limitation is recognized and thus the documentation of the research process is done transparently so that other researchers could follow the same process to achieve the same results.

REFERENCES

Alberca-Oliver, P., Rodríguez-Oromendía, A., & Parte-Esteban, L. (2015). Measuring the efficiency of trade shows: A Spanish case study. *Tourism Management*, *47*, 127–137. https://doi.org/10.1016/j.tourman.2014.09.007

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120. Retrieved from https://search-proquest-com.libproxy.aalto.fi/docview/215258436?accountid=27468

Barney, J. B., Ketchen, D. J., & Wright, M. (2011). The future of resource-based theory: Revitalization or decline? *Journal of Management*, *37*(5), 1299–1315. https://doi.org/10.1177/0149206310391805

Batra, R., & Keller, K. L. (2016). Integrating Marketing Communications: New Findings, New Lessons, and New Ideas. *Journal of Marketing*, *80*(6), 122–145. https://doi.org/10.1509/jm.15.0419

Baumgartner, M., & Thiem, A. (2017). *Model Ambiguities in Configurational Comparative Research*. *Sociological Methods and Research* (Vol. 46). https://doi.org/10.1177/0049124115610351

Bettis-Outland, H., Johnston, W. J., & Dale Wilson, R. (2012). Using trade show information to enhance company success: an empirical investigation. *Journal of Business & Industrial Marketing*, *27*(5), 384–391. https://doi.org/10.1108/08858621211236052

Blythe, J. (2000). Objectives and Measures at UK Trade. *Journal of Marketing Management*, *16*(1–3), 203–222.

Cavanaugh, S. (1976). Setting Objectives and Evaluating the Effectiveness of Trade Show Exhibits. *Journal of Marketing*, *40*(4), 100–103. https://doi.org/10.2307/1251076

Day, G. S. (1994). The Capabilities of Market-Driven Organizations. *Journal of Marketing*, *58*(4), 37. https://doi.org/10.2307/1251915

Fiss, P. C. (2007). A set-theoretic approach to organizational configurations. *Academy of Management Review*, *32*(4), 1190–1198. https://doi.org/10.5465/AMR.2007.26586092

Gilliam, D. A. (2015). Trade show boothscapes. *Journal of Marketing Management*, *31*(17–18), 1878–1898. https://doi.org/10.1080/0267257X.2015.1071276

Gopalakrishna, S., & Lilien, G. L. (1995). A Three-Stage Model of Industrial Trade Show Performance. *Marketing Science*, *14*(1), 22. https://doi.org/10.1287/mksc.14.1.22

Gopalakrishna, S., Lilien, G. L., Williams, J. D., & Sequeira, I. K. (1995). Do trade shows pay off? *Journal of Marketing*, *59*(3), 75. https://doi.org/10.2307/1252121

Gopalakrishna, S., & Williams, J. D. (1992). Planning and performance assessment of industrial trade shows: An exploratory study. *International Journal of Research in Marketing*, *9*(3), 207–224. https://doi.org/10.1016/0167-8116(92)90018-G

Hansen, K. (1999). Trade Show Performance : A Conceptual Framework and Its Implications for Future Research. *Academy of Marketing Science Review*, *8*(08).

Hansen, K. (2004). Measuring performance at trade shows - Scale development and validation. *Journal of Business Research*, *57*(1), 1–13. https://doi.org/10.1016/S0148-2963(02)00269-2

Herbig, P., Hara, B. O., Palumbo, F. A., Herbig, P., Hara, B. O., & Palumbo, F. A. (2006). Trade show : who , what , why.

Herbig, P., O'Hara, B., & Palumbo, F. (1997). Differences between trade show exhibitors and non-exhibitors. *Journal of Business & Industrial Marketing*, *12*(6), 368–382. https://doi.org/10.1108/08858629710190222

Hooley, G. J., Greenley, G. E., Cadogan, J. W., & Fahy, J. (2005). The performance impact of marketing resources. *Journal of Business Research*, *58*(1 SPEC.ISS), 18–27. https://doi.org/10.1016/S0148-2963(03)00109-7

Kerin, R. A., & Cron, W. L. (1987). Assessing Trade Show Functions and Performance: An Exploratory Study. *Journal of Marketing*, *51*(July 1987), 87–94. https://doi.org/10.2307/1251649

Korhonen, K. (2016). *Measuring marketing productivity A comparative study between fuzzy-set and regression analysis*. Aalto University.

Lee, C. H., & Kim, S. Y. (2008). Differential effects of determinants on multi-dimensions of trade show performance: By three stages of pre-show, at-show, and post-show activities. *Industrial Marketing Management*, *37*(7), 784–796. https://doi.org/10.1016/j.indmarman.2008.01.006

Lilien, G. L., & Rangaswamy, A. (1998). *Marketing Engineering: Computer-Assisted Marketing Analysis and Planning*. *Addison-Wesley Pub Co (Sd)*.

Ling-yee, L. (2006). Relationship learning at trade shows: Its antecedents and consequences. *Industrial Marketing Management*, *35*(2), 166–177. https://doi.org/10.1016/j.indmarman.2005.03.006

Ling-yee, L. (2007). The effects of firm resources on trade show performance: how do trade show marketing processes matter? *Journal of Business & Industrial Marketing*,

23(1), 35–47. https://doi.org/10.1108/08858620810841470

Ling-yee, L. (2010). Antecedents and effect of internet implementation for trade shows. *Journal of Business & Industrial Marketing*, *25*(4), 272–283. https://doi.org/10.1108/08858621011038234

Miranda, S., Tavares, P., & Queiró, R. (2017). Perceived service quality and customer satisfaction: A fuzzy set QCA approach in the railway sector. *Journal of Business Research*, (July), 1–7. https://doi.org/10.1016/j.jbusres.2017.12.040

Morgan, N. A., Clark, B. H., & Gooner, R. (2002). Marketing productivity, marketing audits, and systems for marketing performance assessment: Integrating multiple perspectives. *Journal of Business Research*, *55*(5), 363–375. https://doi.org/10.1016/S0148-2963(00)00162-4

Morgan, N. A., Vorhies, D. W., & Mason, C. H. (2009). Market orientation, marketing capabilities, and firm performance. *Strategic Management Journal*, *30*(8), 909–920. https://doi.org/10.1002/smj.764

Morgan, N. A., Zou, S., Vohries, D. W., & Katsikeas, C. (2003). Experiential and Informational Knowledge , Architectural Marketing ... *Decision Sciences*, *34*(2), 287–321. https://doi.org/10.1111/1540-5915.02375

Ngo, L. V., & O'Cass, A. (2012). Performance implications of market orientation, marketing resources, and marketing capabilities. *Journal of Marketing Management*, *28*(1–2), 173–187. https://doi.org/10.1080/0267257X.2011.621443

O'Hara, B. S. (1993). Evaluating the effectiveness of trade shows: A personal selling perspective. *Journal of Personal Selling and Sales Management*, *13*(3), 68–77. https://doi.org/10.1080/08853134.1993.10753958

Phelps, J., & Johnson, E. (1996). Entering the quagmire: Examining the ‖meaning' of integrated marketing communications. *Journal of Marketing Communications*, *2*(3), 159–172. https://doi.org/10.1080/135272696346123

Ragin, C. C. (2006). Set relations in social research: Evaluating their consistency and coverage. *Political Analysis*, *14*(3), 291–310. https://doi.org/10.1093/pan/mpj019

Ragin, C. C. (2014). *The Comparative Method : Moving Beyond Qualitative and Quantitative Strategies*. Oakland, California: University of California Press.

Reid, M., Luxton, S., & Mavondo, F. (2005). The relationship between integrated marketing communication, market orientation, and brand orientation. *Journal of Advertising*, *34*(4), 11–23. https://doi.org/10.1080/00913367.2005.10639210

Rosson, P. J., & Fairs, T. (2001). Firm Experience and International Trade Fairs. *Journal*

of Marketing, *0*(519), 877–901.

Sarmento, M., Farhangmehr, M., & Simões, C. (2015). Participating in Business-to-Business Trade Fairs: Does the Buying Function Matter? *Journal of Convention and Event Tourism*, *16*(4), 273–297. https://doi.org/10.1080/15470148.2015.1043608

Schneider, C. Q., & Wagemann, C. (2010). Standards of Good Practice in Qualitative Comparative Analysis (QCA) and Fuzzy-Sets. *Comparative Sociology*, *9*(3), 397–418. https://doi.org/10.1163/156913210X12493538729793

Schultz, Don E. ; Tannenbaum, Stanley I. ; Lauterborn, R. F. (1993). *Integrated marketing communications*. Lincolnwood (IL) : NTC Business Books 1993.

Seringhaus, F. H. R., & Rosson, P. (2004). An analysis model for performance measurement of international trade fair exhibitors. *Problems and Perspectives in Management*, *2*(4), 152–165.

Seringhaus, F. H. R., & Rosson, P. J. (1999). An Analysis Model for Performance Measurement of International Trade Fair Exhibitors. *American Marketing Association. Conference Proceedings-Summer 1999*, 1–22.

Sirén, A. (2017). *What to Gain from Trade Show Information*. Aalto University. Retrieved from http://urn.fi/URN:NBN:fi:aalto-201712208309

Tafesse, W., & Kitchen, P. J. (2017). IMC - An integrative review. *International Journal of Advertising*, *36*(2), 210–226. https://doi.org/10.1080/02650487.2015.1114168

Tafesse, W., & Korneliussen, T. (2013). Examining the effect of using multiple media tools on the marketing performance of organizations in a trade campaign environment. *Journal of Marketing Communications*, *19*(3), 215–227. https://doi.org/10.1080/13527266.2011.619556

Tafesse, W., & Skallerud, K. (2017). A systematic review of the trade show marketing literature: 1980–2014. *Industrial Marketing Management*, *63*, 18–30. https://doi.org/10.1016/j.indmarman.2016.11.001

Tanner, J. F. (2002). Leveling the playing field: Factors influencing trade show success for small companies. *Industrial Marketing Management*, *31*(3), 229–239. https://doi.org/10.1016/S0019-8501(00)00132-2

The Global Association of the Exhibition Industry. (2019). Global economic impact of exhibitions, (December). Retrieved from https://www.ufi.org/wp-content/uploads/2019/04/Global-Economic- Impact-of-Exhibitions_b.pdf%0A

Thomann, E., Oana, I.-E., & Wittwer, S. (2017). *Performing fuzzy- and crisp set QCA with R. A user-oriented beginner's guide*. *Version 07.04.2017*.

https://doi.org/10.1371/journal.pone.0117245

Vassinen, A. (2012). *Configurational Explaination of Marketing Outcomes: A Fuzzy-Set Qualitative Comparative Analysis Approach*. Aalto University.

Vorhies, D. W. (1998). An investigation of the factors leading to the development of marketing capabilities and organizational effectiveness. *Journal of Strategic Marketing*, *6*, 3–23.

APPENDIX

Truth Table of High-Performance Outcome

```
 OUT: output value
   n: number of cases in configuration
incl: sufficiency inclusion score
 PRI: proportional reduction in inconsistency
```

	PREPARE_TIME	STAFFING	THEME_COMPLEXITY	DESIGN_COMPETITIVENESS	STAFF_CAPABILITY	FAIR_ENGAGEMENT	INFO_GATHER	STAFF_TRAINING	OUT	n	incl	PRI	cases
13	0	0	0	0	1	1	0	0	1	1	1	1	46
47	0	0	1	0	1	1	1	0	1	1	1	1	28
52	0	0	1	1	0	0	1	1	1	1	1	1	50
54	0	0	1	1	0	1	0	1	1	1	1	1	22
61	0	0	1	1	1	1	0	0	1	1	1	1	8
86	0	1	0	1	0	1	0	1	1	1	1	1	48
90	0	1	0	1	1	0	0	1	1	1	1	1	2
95	0	1	0	1	1	1	1	0	1	1	1	1	36
111	0	1	1	0	1	1	1	0	1	1	1	1	11
112	0	1	1	0	1	1	1	1	1	1	1	1	44
133	1	0	0	0	0	1	0	0	1	1	1	1	49
196	1	1	0	0	0	0	1	1	1	1	1	1	32
208	1	1	0	0	1	1	1	1	1	1	1	1	6
209	1	1	0	1	0	0	0	0	1	1	1	1	42
227	1	1	1	0	0	0	1	0	1	1	1	1	40
184	1	0	1	1	0	1	1	1	0	1	0.744	0	21
169	1	0	1	0	1	0	0	0	0	1	0.67	0.67	37
56	0	0	1	1	0	1	1	1	0	1	0.66	0.493	5
60	0	0	1	1	1	0	1	1	0	1	0.66	0.493	4
162	1	0	1	0	0	0	0	1	0	1	0.66	0	27
166	1	0	1	0	0	1	0	1	0	1	0.66	0	34
230	1	1	1	0	0	1	0	1	0	1	0.66	0	10
175	1	0	1	0	1	1	1	0	0	2	0.5	0.254	17,41
161	1	0	1	0	0	0	0	0	0	1	0.496	0.33	31
167	1	0	1	0	0	1	1	0	0	1	0.496	0	1
101	0	1	1	0	0	1	0	0	0	1	0.493	0	18
139	1	0	0	0	1	0	1	0	0	1	0.493	0	23
234	1	1	1	0	1	0	0	1	0	1	0.493	0	35
9	0	0	0	0	1	0	0	0	0	2	0.425	0.198	3,19
188	1	0	1	1	1	0	1	1	0	4	0.398	0.145	14,24,29,33
129	1	0	0	0	0	0	0	0	0	1	0.398	0	38
163	1	0	1	0	0	0	1	0	0	1	0.398	0	16
4	0	0	0	0	0	0	1	1	0	1	0.33	0	43
2	0	0	0	0	0	0	0	1	0	1	0.33	0	47
165	1	0	1	0	0	1	0	0	0	1	0.33	0	12
171	1	0	1	0	1	0	1	0	0	1	0.33	0	39
1	0	0	0	0	0	0	0	0	0	3	0.33	0.141	13,20,26
137	1	0	0	0	1	0	0	0	0	2	0.198	0	15,30
16	0	0	0	0	1	1	1	1	0	1	0	0	9
65	0	1	0	0	0	0	0	0	0	1	0	0	45
75	0	1	0	0	1	0	1	0	0	1	0	0	7
134	1	0	0	0	0	1	0	1	0	1	0	0	25

Complex Solution - High Performance Outcome

```
n OUT = 1/0/C: 15/35/0
  Total      : 50

Number of multiple-covered cases: 1

M1: prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER +
    prepare_time*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*staff_training +
    prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*info_gather*staff_training +
    prepare_time*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING +
    prepare_time*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*STAFF_CAPABILITY*FAIR_ENGAGEMENT*info_gather*staff_training +
    prepare_time*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*staff_training +
    prepare_time*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*STAFF_CAPABILITY*fair_engagement*info_gather*STAFF_TRAINING +
    prepare_time*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    PREPARE_TIME*staffing*theme_complexity*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training +
    PREPARE_TIME*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING +
    PREPARE_TIME*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    PREPARE_TIME*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*staff_capability*fair_engagement*info_gather*staff_training +
    PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*staff_training => OUTCOME
```

		inclS	PRI	covS	covU	cases
1	prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER	1.000	1.000	0.065	0.032	11; 44
2	prepare_time*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*staff_training	1.000	1.000	0.065	0.032	28; 11
3	prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*info_gather*staff_training	1.000	1.000	0.032	0.032	46
4	prepare_time*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING	1.000	1.000	0.032	0.032	50
5	prepare_time*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING	1.000	1.000	0.032	0.032	22
6	prepare_time*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*STAFF_CAPABILITY*FAIR_ENGAGEMENT*info_gather*staff_training	1.000	1.000	0.032	0.032	8
7	prepare_time*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*staff_training	1.000	1.000	0.032	0.032	36
8	prepare_time*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*STAFF_CAPABILITY*fair_engagement*info_gather*STAFF_TRAINING	1.000	1.000	0.048	0.032	2
9	prepare_time*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING	1.000	1.000	0.032	0.016	48
10	PREPARE_TIME*staffing*theme_complexity*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training	1.000	1.000	0.048	0.048	49
11	PREPARE_TIME*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING	1.000	1.000	0.048	0.048	32
12	PREPARE_TIME*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING	1.000	1.000	0.032	0.032	6
13	PREPARE_TIME*STAFFING*theme_complexity*DESIGN_COMPETITIVENESS*staff_capability*fair_engagement*info_gather*staff_training	1.000	1.000	0.032	0.032	42
14	PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*staff_training	1.000	1.000	0.048	0.048	40
	M1	1.000	1.000	0.535		

Parsimony Solution – High Performance Outcome

```
> myTB_par2

n OUT = 1/0/C: 15/35/0
  Total      : 50

Number of multiple-covered cases: 2

M1: DESIGN_COMPETITIVENESS*info_gather + PREPARE_TIME*STAFFING*INFO_GATHER + theme_complexity*FAIR_ENGAGEMENT*staff_training +
    DESIGN_COMPETITIVENESS*staff_capability*fair_engagement + prepare_time*THEME_COMPLEXITY*STAFF_CAPABILITY*FAIR_ENGAGEMENT => OUTCOME
```

		inclS	PRI	covS	covU	cases
1	DESIGN_COMPETITIVENESS*info_gather	0.868	0.848	0.210	0.113	22; 8; 48; 2; 42
2	PREPARE_TIME*STAFFING*INFO_GATHER	0.901	0.859	0.145	0.129	32; 6; 40
3	theme_complexity*FAIR_ENGAGEMENT*staff_training	0.771	0.703	0.161	0.145	46; 36; 49
4	DESIGN_COMPETITIVENESS*staff_capability*fair_engagement	1.000	1.000	0.129	0.048	50; 42
5	prepare_time*THEME_COMPLEXITY*STAFF_CAPABILITY*FAIR_ENGAGEMENT	1.000	1.000	0.210	0.145	28; 8; 11; 44
	M1	0.881	0.826	0.711		

Truth Table of Low Performance Outcome

OUT: output value
n: number of cases in configuration
incl: sufficiency inclusion score
PRI: proportional reduction in inconsistency

	PREPARE_TIME	STAFFING	THEME_COMPLEXITY	DESIGN_COMPETITIVENESS	STAFF_CAPABILITY	FAIR_ENGAGEMENT	INFO_GATHER	STAFF_TRAINING	OUT	n	incl	PRI	cases
137	1	0	0	0	1	0	0	0	1	2	1	1	15,30
4	0	0	0	0	0	0	1	1	1	1	1	1	43
16	0	0	0	0	1	1	1	1	1	1	1	1	9
65	0	1	0	0	0	0	0	0	1	1	1	1	45
75	0	1	0	0	1	0	1	0	1	1	1	1	7
101	0	1	1	0	0	1	0	0	1	1	1	1	18
129	1	0	0	0	0	0	0	0	1	1	1	1	38
134	1	0	0	0	0	1	0	1	1	1	1	1	25
139	1	0	0	0	1	0	1	0	1	1	1	1	23
162	1	0	1	0	0	0	0	1	1	1	1	1	27
163	1	0	1	0	0	0	1	0	1	1	1	1	16
165	1	0	1	0	0	1	0	0	1	1	1	1	12
166	1	0	1	0	0	1	0	1	1	1	1	1	34
167	1	0	1	0	0	1	1	0	1	1	1	1	1
171	1	0	1	0	1	0	1	0	1	1	1	1	39
184	1	0	1	1	0	1	1	1	1	1	1	1	21
230	1	1	1	0	0	1	0	1	1	1	1	1	10
234	1	1	1	0	1	0	0	1	1	1	1	1	35
188	1	0	1	1	1	0	1	1	0	4	0.898	0.855	14,24,29,33
1	0	0	0	0	0	0	0	0	0	3	0.89	0.859	13,20,26
9	0	0	0	0	1	0	0	0	0	2	0.858	0.802	3,19
175	1	0	1	0	1	1	1	0	0	2	0.83	0.746	17,41
161	1	0	1	0	0	0	0	0	0	1	0.752	0.67	31
2	0	0	0	0	0	0	0	1	0	1	0.67	0.507	47
56	0	0	1	1	0	1	1	1	0	1	0.67	0.507	5
60	0	0	1	1	1	0	1	1	0	1	0.67	0.507	4
133	1	0	0	0	0	1	0	0	0	1	0.66	0	49
227	1	1	1	0	0	0	1	0	0	1	0.66	0	40
86	0	1	0	1	0	1	0	1	0	1	0.493	0	48
47	0	0	1	0	1	1	1	0	0	1	0.493	0	28
61	0	0	1	1	1	1	0	0	0	1	0.493	0	8
111	0	1	1	0	1	1	1	0	0	1	0.493	0	11
112	0	1	1	0	1	1	1	1	0	1	0.493	0	44
90	0	1	0	1	1	0	0	1	0	1	0.33	0	2
169	1	0	1	0	1	0	0	0	0	1	0.33	0.33	37
13	0	0	0	0	1	1	0	0	0	1	0	0	46
52	0	0	1	1	0	0	1	1	0	1	0	0	50
54	0	0	1	1	0	1	0	1	0	1	0	0	22
95	0	1	0	1	1	1	1	0	0	1	0	0	36
196	1	1	0	0	0	0	1	1	0	1	0	0	32
208	1	1	0	0	1	1	1	1	0	1	0	0	6
209	1	1	0	1	0	0	0	0	0	1	0	0	42

Complex Solution – Low Performance Outcome

```
n OUT = 1/0/C: 19/31/0
  Total      : 50

Number of multiple-covered cases: 3

M1: PREPARE_TIME*staffing*theme_complexity*design_competitiveness*fair_engagement*info_gather*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*info_gather*STAFF_TRAINING +
    PREPARE_TIME*staffing*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    PREPARE_TIME*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*info_gather*staff_training +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training +
    (PREPARE_TIME*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*fair_engagement*INFO_GATHER*staff_training) => outcome
M2: PREPARE_TIME*staffing*theme_complexity*design_competitiveness*fair_engagement*info_gather*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*info_gather*STAFF_TRAINING +
    PREPARE_TIME*staffing*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    PREPARE_TIME*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*info_gather*staff_training +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training +
    (PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training) => outcome
```

```
M3: PREPARE_TIME*staffing*theme_complexity*design_competitiveness*fair_engagement*info_gather*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*info_gather*STAFF_TRAINING +
    PREPARE_TIME*staffing*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    PREPARE_TIME*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*info_gather*staff_training +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*fair_engagement*info_gather*STAFF_TRAINING +
    prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training +
    (PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training) => outcome
M4: PREPARE_TIME*staffing*theme_complexity*design_competitiveness*fair_engagement*info_gather*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*info_gather*STAFF_TRAINING +
    PREPARE_TIME*staffing*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    PREPARE_TIME*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING +
    prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*info_gather*staff_training +
    prepare_time*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING +
    PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*fair_engagement*info_gather*STAFF_TRAINING +
    prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training +
    (PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*staff_training +
    PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*fair_engagement*INFO_GATHER*staff_training +
    PREPARE_TIME*staffing*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training) => outcome
```

		inclS	PRI	covS	covU	(M1)	(M2)	(M3)	(M4)
1	PREPARE_TIME*staffing*theme_complexity*design_competitiveness*fair_engagement*info_gather*staff_training	1.000	1.000	0.091	0.034	0.034	0.091	0.091	0.091
2	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*info_gather*STAFF_TRAINING	0.802	0.673	0.046	0.012	0.012	0.012	0.012	0.012
3	PREPARE_TIME*staffing*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING	1.000	1.000	0.057	0.023	0.023	0.023	0.023	0.023
4	PREPARE_TIME*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING	1.000	1.000	0.057	0.023	0.023	0.023	0.023	0.023
5	prepare_time*staffing*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING	1.000	1.000	0.034	0.023	0.023	0.023	0.023	0.023
6	prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING	1.000	1.000	0.023	0.012	0.012	0.012	0.012	0.012
7	prepare_time*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*info_gather*staff_training	1.000	1.000	0.034	0.034	0.034	0.034	0.034	0.034
8	prepare_time*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training	1.000	1.000	0.023	0.023	0.023	0.023	0.023	0.023
9	PREPARE_TIME*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING	1.000	1.000	0.045	0.045	0.045	0.045	0.045	0.045
10	PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*fair_engagement*info_gather*STAFF_TRAINING	1.000	1.000	0.023	0.023	0.023	0.023	0.023	0.023
11	prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training	1.000	1.000	0.023	0.023	0.023	0.023	0.023	0.023
12	PREPARE_TIME*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*staff_training	1.000	1.000	0.080	0.000	0.023			
13	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather	1.000	1.000	0.068	0.000		0.034		
14	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*staff_training	1.000	1.000	0.079	0.000	0.068		0.034	0.068
15	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*INFO_GATHER*staff_training	1.000	1.000	0.091	0.000		0.079	0.045	
16	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*fair_engagement*INFO_GATHER*staff_training	1.000	1.000	0.079	0.000	0.068			0.045
17	PREPARE_TIME*staffing*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training	1.000	1.000	0.057	0.000		0.046	0.046	0.023

		cases
12	PREPARE_TIME*staffing*theme_complexity*design_competitiveness*fair_engagement*info_gather*staff_training	38; 15,30
13	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*info_gather*STAFF_TRAINING	27; 34
14	PREPARE_TIME*staffing*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING	25; 34
15	PREPARE_TIME*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*STAFF_TRAINING	34; 10
16	prepare_time*staffing*theme_complexity*design_competitiveness*staff_capability*fair_engagement*INFO_GATHER*STAFF_TRAINING	43
17	prepare_time*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING	9
NA	prepare_time*STAFFING*theme_complexity*design_competitiveness*staff_capability*fair_engagement*info_gather*staff_training	45
NA	prepare_time*STAFFING*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training	7
NA	PREPARE_TIME*staffing*THEME_COMPLEXITY*DESIGN_COMPETITIVENESS*staff_capability*FAIR_ENGAGEMENT*INFO_GATHER*STAFF_TRAINING	21
NA	PREPARE_TIME*STAFFING*THEME_COMPLEXITY*design_competitiveness*STAFF_CAPABILITY*fair_engagement*info_gather*STAFF_TRAINING	35
NA	prepare_time*STAFFING*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather*staff_training	18
12	PREPARE_TIME*staffing*theme_complexity*design_competitiveness*STAFF_CAPABILITY*fair_engagement*staff_training	15,30; 23
13	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*info_gather	12; 34
14	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT*staff_training	12; 1
15	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*staff_capability*INFO_GATHER*staff_training	16; 1
16	PREPARE_TIME*staffing*THEME_COMPLEXITY*design_competitiveness*fair_engagement*INFO_GATHER*staff_training	16; 39
17	PREPARE_TIME*staffing*design_competitiveness*STAFF_CAPABILITY*fair_engagement*INFO_GATHER*staff_training	23; 39

Parsimony Solution – Low Performance Outcome

```
n OUT = 1/0/C: 19/31/0
  Total      : 50

Number of multiple-covered cases: 5

M1: STAFFING*design_competitiveness*info_gather + prepare_time*theme_complexity*design_competitiveness*INFO_GATHER + staffing*design_competitiveness*fair_engagement*INFO_GATHER +
    (PREPARE_TIME*info_gather*STAFF_TRAINING + PREPARE_TIME*staffing*theme_complexity*fair_engagement + PREPARE_TIME*THEME_COMPLEXITY*staff_capability*FAIR_ENGAGEMENT)
    => outcome
M2: STAFFING*design_competitiveness*info_gather + prepare_time*theme_complexity*design_competitiveness*INFO_GATHER + staffing*design_competitiveness*fair_engagement*INFO_GATHER +
    (PREPARE_TIME*info_gather*STAFF_TRAINING + PREPARE_TIME*THEME_COMPLEXITY*staff_capability*FAIR_ENGAGEMENT +
    PREPARE_TIME*theme_complexity*design_competitiveness*fair_engagement*staff_training) => outcome
M3: STAFFING*design_competitiveness*info_gather + prepare_time*theme_complexity*design_competitiveness*INFO_GATHER + staffing*design_competitiveness*fair_engagement*INFO_GATHER +
    (PREPARE_TIME*staffing*theme_complexity*fair_engagement + PREPARE_TIME*staffing*staff_capability*STAFF_TRAINING +
    PREPARE_TIME*THEME_COMPLEXITY*staff_capability*FAIR_ENGAGEMENT) => outcome
M4: STAFFING*design_competitiveness*info_gather + prepare_time*theme_complexity*design_competitiveness*INFO_GATHER + staffing*design_competitiveness*fair_engagement*INFO_GATHER +
    (PREPARE_TIME*staffing*theme_complexity*fair_engagement + PREPARE_TIME*staffing*staff_capability*STAFF_TRAINING +
    THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT) => outcome
M5: STAFFING*design_competitiveness*info_gather + prepare_time*theme_complexity*design_competitiveness*INFO_GATHER + staffing*design_competitiveness*fair_engagement*INFO_GATHER +
    (PREPARE_TIME*staffing*staff_capability*STAFF_TRAINING + PREPARE_TIME*THEME_COMPLEXITY*staff_capability*FAIR_ENGAGEMENT +
    PREPARE_TIME*theme_complexity*design_competitiveness*fair_engagement*staff_training) => outcome
M6: STAFFING*design_competitiveness*info_gather + prepare_time*theme_complexity*design_competitiveness*INFO_GATHER + staffing*design_competitiveness*fair_engagement*INFO_GATHER +
    (PREPARE_TIME*staffing*staff_capability*STAFF_TRAINING + THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT +
    PREPARE_TIME*theme_complexity*design_competitiveness*fair_engagement*staff_training) => outcome
```

		incl S	PRI	cov S	cov U	(M1)	(M2)	(M3)	(M4)	(M5)	(M6)	cases
1	STAFFING*design_competitiveness*info_gather	0.825	0.730	0.159	0.034	0.057	0.057	0.080	0.057	0.080	0.057	45; 18; 10; 35
2	prepare_time*theme_complexity*design_competitiveness*INFO_GATHER	0.890	0.876	0.091	0.046	0.046	0.046	0.046	0.046	0.046	0.046	43; 9; 7
3	staffing*design_competitiveness*fair_engagement*INFO_GATHER	0.929	0.901	0.147	0.068	0.068	0.068	0.068	0.068	0.068	0.068	43; 23; 16; 39
4	PREPARE_TIME*info_gather*STAFF_TRAINING	0.736	0.641	0.125	0.011	0.034	0.034					25; 27; 34; 10; 35
5	PREPARE_TIME*staffing*theme_complexity*fair_engagement	0.910	0.877	0.114	0.000	0.057		0.057	0.057			38; 15,30; 23
6	PREPARE_TIME*staffing*staff_capability*STAFF_TRAINING	0.910	0.837	0.114	0.000			0.023	0.068	0.023	0.068	25; 27; 34; 21
7	PREPARE_TIME*THEME_COMPLEXITY*staff_capability*FAIR_ENGAGEMENT	1.000	1.000	0.182	0.000	0.113	0.113	0.068		0.068		12; 34; 1; 21; 10
8	THEME_COMPLEXITY*design_competitiveness*staff_capability*FAIR_ENGAGEMENT	1.000	1.000	0.193	0.034				0.102		0.102	18; 12; 34; 1; 10
9	PREPARE_TIME*theme_complexity*design_competitiveness*fair_engagement*staff_training	1.000	1.000	0.125	0.011		0.068			0.068	0.068	38; 15,30; 23
	M1	0.880	0.836	0.580								
	M2	0.883	0.839	0.591								
	M3	0.894	0.852	0.568								
	M4	0.899	0.852	0.602								
	M5	0.896	0.856	0.580								
	M6	0.901	0.856	0.613								

Questionnaire

Aalto University

Trade Fair's Success Factors

You are welcomed to participate in our study related to Success Factors of Trade Fairs, conducted in the cooperation with The Finnish Fair Corporation (Messukeskus).

The study aims to gather the information of various factors that can make the impacts on the success of companies' exhibitions at trade fairs. As a result, the study will give a summary of factors leading to a successful exhibition and discuss best practices for companies attending trade shows. Your response is highly appreciated; it will not be used for marketing purposes and will be handled anonymously.

This survey contains 45 questions and is estimated to take 15 minutes to complete.

You can always save your answers and continue later by clicking "Save and Continue" button at the end of the page!

PART I.

The questions in this section will help us to understand the trade-fair-related activities of companies before the Fair, during the Fair and afterwards. Please refer to the **Latest Trade Fair** your company attended for your answers.

1. What is the name of the Latest Trade Fair that your company attended? This will be the reference for the rest of the questionnaire. *

2. How many months in advance had your company decided to attend the Fair? *

- 3 months or less
- 7-12 months
- 4-6 months
- more than 12 months

3. How many months in advance had the planning phase for the fair's exhibition started? *

- 3 months or less
- 7-12 months
- 4-6 months
- more than 12 months

Please answer the next three questions regarding the **Resources** that were used for the planning and preparation for the Fair.

4. How many people from your company were involved in the preparation for the Fair? *

5. For **which tasks** did you outsource to agencies in **preparing and planning** for the Fair participation? You can select multiple answers. *

- Promoting company's participation at the Fair to attract visitors
- Design and set up exhibition booth
- Produce marketing materials (flyers, brochures)
- Booth personnel recruitment/training
- None of the tasks were outsourced
- Other (please specify)

6. How many people from the **agencies** and **outsourced services** were involved in preparing and planning for the Fair? *

7. Can you estimate how much of trade fair's material was **pre-existing** and **re-used** for the Fair, in percentage? (<10% re-used means you had to prepare almost everything from scratch) *

- <10% were re-used
- 50 – 70% were re-used
- 10% - 49% were re-used
- >90% were re-used

8. What was the **floor area** of your company's booth (in m2)? *

9. About the **Theme** of your company's exhibition booth. Please indicate if any of the following themes were used in your company's exhibition booth. You can select multiple answers. *

- Company milestones
- Key products
- Important brand attributes
- Brand image or positioning
- The country or place of origin
- Company history
- Marketing campaign
- Creative concept
- Other (please specify)

10. Please briefly describe the **theme(s)** in more detail. *

What milestones or products, images, etc. were used as the themes. How were they connected to the company's products and services, and what did your company expect to achieve by using these themes, etc.

11. On a scale of 1-7, can you evaluate your company's **booth design** in comparison to its **key competitors** on the following aspects. (1=much worse, 4=equal, 7=much better) *

1 2 3 4 5 6 7

Overall layout design	○	○	○	○	○	○	○
Lighting	○	○	○	○	○	○	○
Level of Complexity	○	○	○	○	○	○	○
Use of Empty Space between design elements	○	○	○	○	○	○	○
Ability to tell story	○	○	○	○	○	○	○

12. Can you briefly describe the **booth design** and its key elements? *

What were the design concept, materials, equipment, color theme, lightings, product samples, etc.

13. Which of the following activities were used to **promote** the exhibition, get customer attention and attract visitors **before the Fair**? You can select multiple answers. *

- ○ Raffle/Giveaways of free admission tickets
- ○ Content about the fair's exhibition on social media
- ○ Content about the fair's exhibition on company's website
- ○ Personal invitation to tradeshow by mail/email/direct delivery (free tickets)
- ○ Direct Mail
- ○ Email
- ○ Telemarketing
- ○ Mobile Advertising
- ○ Radio or TV Advertising
- ○ Online Search Advertising
- ○ Social Media Advertising
- ○ Featured in Social Media of Organizer
- ○ Company name included in organizer's press kits
- ○ Article on online or offline media (PR)
- ○ Articles on Trade Journals
- ○ Other (please specify)

14. Which of the following tools did your company use to **communicate** to customers **during the Fair**? *

- ○ Brochures
- ○ Merchandise giveaways
- ○ Aided media: Video, Virtual Reality

- Aided media: Tablet, Computer with pre-designed content for visitors
- Keynote presentations
- Real-time updates on social media
- Company logo included in organizers' stand location plan
- Other (please specify)

15. Which of the following activities were used to **create interactions** with customers **during the Fair**? *

- Social event organized at the booth
- Lounge area at the booth
- Product/service demonstration or testing at the booth
- Performing arts at the booth (Music, etc.)
- Non-product-related activities at the booth (photo booths, games, wine tasting, etc.)
- Social event organized at a nearby location
- Dinner party with key customers
- Dinner party with key customers
- Sporting events with key customers and partners
- Private viewing of new products at the booth or nearby location
- Other (please specify)

16. Which of the following **sales promotion** activities were used **during the Fair**? *

- Sales promotion for transactions at the Fair
- General sales promotion during and after the Fair
- Discount codes or vouchers for transactions during or after the Fair
- Product sample giveaways
- Promised special discount after the Fair
- Other (please specify)

17. How did you **collect customer contacts** during the Fair ? *

- Ask for contact in exchange for discounts after the Fair
- Ask for contact in exchange for free gifts/samples
- Ask for contact for later answers for their questions
- Ask for contact and permission for marketing materials
- Other (please specify)

18. Which of the below activities were used to **follow-up** with customers **after the Fair**? *

- Direct Mail
- Social media
- Email Tradeshow related articles on media
- Telemarketing
- Other (please specify)

19. How many **follow-up emails** were sent out after the Fair? (Please give an estimation if there is no data) *

In total?

Per recipient?

20. How long after the tradeshow were these **follow-up emails** sent, in weeks? *

Please give an estimation or elaborate if you don't have any data.

21. What was the **key content** of your follow-up emails? You can choose multiple answers. *

- Sales Promotion
- New products or services
- Educational content (industry trends, lifestyle, etc.)
- Follow-up on a specific conversation during fair
- Other (please specify)

22. At a typical moment, **how many** booth personnel were available at your booth? *

Please give an estimation or elaborate if you don't have any data.

23. Which were the **major functions/departments** that your booth personnel represented? You can select multiple options. *

- Sales
- Customer Service
- Marketing
- Finance

- Other (please specify)

24. Was there a training for booth personnel? *

- Yes
- No

25. If yes, what was the amount of training? (formal training and meetings included)

In Hours?

In Number of Sessions?

26. What **themes** were trained to booth personnel? You can select multiple answers *

- Personal selling
- Researching for customer needs
- Getting customer contact
- Getting competitor information
- Analyzing Customer profiles
- Analyzing customer profiles
- Other (please specify)

27. On a scale of 1 - 7, please evaluate the following regarding your **booth personnel's capabilities** (1=very poor, 7=very good) *

	1	2	3	4	5	6	7
The booth personnel could answer questions about new products/services.							
The booth personnel could arouse product interest of the fair's visitors.							
The booth personnel could handle existing products' related questions.							
The booth personnel could listen carefully to the fair visitors.							
The booth personnel had knowledge of other departments' operations.							
The booth personnel had experiences attending other fairs							
The booth personnel had outgoing and sociable personalities.							

The booth personnel had sales experience.	

28. On a scale of 1 - 7, how was the information acquired at the tradeshow used after the exhibition? Please rate the following statements regarding your company's **use of information** after the fair. (1= little use, 7 = heavy use) *

	1	2	3	4	5	6	7
We analyzed additional information requested by other managers.							
We analyzed visitors' company/product knowledge.							
We analyzed visitors' product- category interests.							
We analyzed visitors' roles in purchase decisions.							
We analyzed visitors' sizes of purchase.							
We analyzed amount of time needed before visitors make the decisions.							

29. On a scale of 1 - 7, please rate the following statements regarding the **quality of the information** that your company acquired during the tradeshow (1 = Strongly Disagree, 7 = Strongly Agree) *

	1	2	3	4	5	6	7
Information was acquired timely							
Information presented at the Fair were clear							
Language and concepts used at the Fair were were clear							
Information from the Fair was accurate							
Information from the Fair was conflicting							
Information from the Fair was objective							
Information from the Fair was relevant							
Information from the Fair was unexpected or surprising							
Information from the Fair was useful in overall							
Information from the Fair was useful in order to to evaluate market potential of our products and services							

PART II.

Please answer the following questions to help us understand your company's investments in this Fair and also Fair Marketing.

For **Question 29 - 32**, please use the referenced Fair for your answer

30. How much was the Fair's **participation fee** for your company? (in Euros) *

31. What is the total **cost of production** (booth, other marketing materials) for the Fair participation, in Euros? *

32. What is the **cost of logistics** (travel, transportation, outsourced booth staff) for the Fair Exhibition, in Euros? *

33. What is the cost of **marketing communications** in relation to the Fair participation, in Euros? (Direct mail campaign, Display Ads, etc.) *

34. What is your company's **Total Annual Budget** for Trade Fair Participation, in Euros? Please give an estimation if you are not sure. *

35. What is your company's **Annual Budget** for Trade Fair Participation, **in percentage (%)** of Total Annual Marketing Budget? Please give an estimation if you are not sure. *

PART III.

The questions in the following section are regarding the outcomes of the Fair participation. Please refer to **the referenced Fair** for your answers.

36. In general, how satisfied is your company with its **overall performance** at the Spring Fair - Kevätmessut 2018? (1 = very dissatisfied , 7= very satisfied) *

	1	2	3	4	5	6	7
Overall Satisfaction	○	○	○	○	○	○	○

37. What is the estimated number of visitors **visited** your company's booth during the Fair? *

Please elaborate if you do not have any data

38. What is the estimated number of visitors that had **face-to-face interaction** with your booth personnel during the Fair? *

Please elaborate if you do not have any data

39. How many completed business transactions were recorded during the Fair? *

Please elaborate if you do not have any data

40. How many contacts were acquired during the Fair? *

Please elaborate if you do not have any data

41. What is the sales amount **resulted from the Fair**, in Euros? *

Please elaborate if you do not have any data

During the Fair:

Six months after the Fair:

Other Comments:

42. Below is a list of possible **objectives** for trade fair attendance. Please rate the degree to which your company achieved these objectives. (1 = We did not reach the objective, 4= we reached the objective, 7 = We exceeded the objective) *

	Not An Objective	1	2	3	4	5	6	7
Promoting existing products/services								
Contacting new customers								
Promoting new products/services products/services								
Increasing sales orders								
Getting an edge over non-exhibitors								
Maintaining contact with existing customers								
Conducting market research								
Getting competitor intelligence								
Realizing new product/service trends								
Increasing staff's trade show experience								
Enhancing company's image								

PART IV. (FINAL)

Below questions will help us to know more about your company as an exhibitor at the Fair.

43. What is the best description for your position *

- Staff
- Specialist
- Middle management
- Top management Entrepreneur
- Other (please specify)

44. What is the size of your company *

- 1 - 10
- 11 - 50
- 50 - 99
- 100 - 499
- > 500

45. How often does your company exhibit in tradeshows? *

- Once every two years or less
- Once a year
- Twice a year
- Three times a year or more

46. Please provide your company's name

47. Please leave your email for a chance to win a movie ticket in our raffle!

Email

Please click SUBMIT to complete your response

(0 of 5 pages)